GDARD Ref:
002/15-16/E0088

Submitted to

GAUTENG PROVINCE
AGRICULTURE AND RURAL DEVELOPMENT
REPUBLIC OF SOUTH AFRICA

Gauteng Department of Agriculture and Rural Development (GDARD)
SUE Branch
Diamond Building
101 Diagonal Street
Johannesburg
2000

Attention:
GDARD SUE – Administration Unit
(011) 240 2500

Final
Basic Assessment Report:

Development of the new Magalies Cemetery and Waste Transfer Station

Prepared by:

NALEDZI ENVIRONMENTAL CONSULTANTS
Reg no. 2003/0890358/23

141 Thabo Mbeki Street, Fauna Park, Polokwane, Postnet Suite 320, Library Gardens, P/Bag X 9307, Polokwane, 0700
Tel: 015 296 3988 **Fax:** 015 296 4021
Email: botham@naledzi.co.za / dmusetsho@naledzi.co.za

Prepared for:

Mogale City
local Municipality

Mogale City Local Municipality
Integrated Environmental Management

c/o Commissioner and Market Street
P O Box 94, Krugersdorp, 1740
Attention: Mr. Koogan Naidoo
Email: koogan.naidoo@mogalecity.gov.za

Report date: October 2015

Project Information

Description: Proposed development of the new Magalies Cemetery and Waste Transfer Station

GDARD Reference: Gaut 002/15-16/E0088

Responsible Official: Mr. Aristotelis Kapsosoderis provided comments on the Draft BAR.

Applicant: Mogale City Local Municipality: Integrated Environmental Management (MCLM:IEM)

Environmental Assessment Practitioners: Naledzi Environmental Consultants CC (NEC)

Document versions: Draft / Consultation Basic Assessment Report (CBAR) – August 2015
Final Basic Assessment Report (FBAR) – October 2015

Document status: *Final BAR, October 2015*

GDARD comments on Draft BAR: Received on 9 October 2015 and addressed in Final BAR.

Project Location

Site description: Portion 22 of the farm Rietpoort 395JQ (22/395JQ)

Project type: Public amenity / municipal service infrastructure

Closest Town: 11km West of Magaliesburg (Quarter Degree Grid: 2527CD and 2627AB)

Local Authority: Mogale City Local Municipality

Region: West Rand District Municipality

Province: Gauteng (western region)

Environmental Assessment Practitioners:

A team of qualified and experienced consultants was assembled for this project. The following consultants are involved in this project:

Mr. Musetsho K.D M.Sc (.Env Mngt) – Reviewer, Project Management

Mrs. Botha MI – Environmentalist, report preparation and Public Participation

REPORT COMPILED BY*:*

……
Marissa Ilse Botha
Senior Environmental Consultant

REPORT REVIEWD BY*:*

……
Khangwelo Desmond Musetsho (CEAPSA, SAIEES)
Senior Environmental Scientist and Managing Director

Expertise and Qualifications of Project Team

Desmond Musetsho is a Senior Environmental Scientist and currently the Managing Director of Naledzi Environmental Consultants. He has over 13 years of experience in the field of Integrated Environmental Management, both on a project and management level. Mr. Musetsho holds a Professional Bachelor of Environmental Management (Hons) Degree from the University of Venda and is currently completing his Masters in Environmental Sciences. He has extensive experience in Environmental Impact Assessments, development of management plans, development and implementation of Environmental Management Programmes for construction, and facilitation of public processes and workshops. Desmond is a Certified Environmental Assessment Practitioner (ICB-EAPSA) and an Environmental Scientist (SAIEES).

Marissa Botha is a Senior Environmentalist and Public Participation Consultant. She has over 12 years' experience in environmental management and is responsible for the management of environmental projects, such as Environmental Impact Assessments processes (Scoping and EIA), Basic Assessment Processes and Environmental Management Programmes. She is also responsible for the conduct and management of applications for Prospecting and Mining Rights and its related environmental processes under the mineral act.

NEC has conducted Basic Assessment processes and Environmental Impact Assessment processes for multiple projects under the National Environmental Management Act, 1998 (Act 107 of 1998) and the Mineral and Petroleum Resources Development Act, 2002 within the provinces of Gauteng, Mpumalanga, North West, Northern Cape and Limpopo.

Please refer to attached CV's and Declaration of Independence attached as Appendix I – Other Information.

Assumptions and Limitations

NEC has prepared this BAR and its associated versions for the sole use of Mogale City Local Municipality: Integrated Environmental Management (MCLM: IEM) and the appointed development consultants/contractors to this project, in accordance with generally accepted consulting practices and for the intended purposes, as stated in the agreement under which this work was prepared. The report is also intended for review by the relevant competent authorities. Interested & Affected Parties are also privy to the review of the reports to provide input to the BA process. This report may not be relied upon by any other party without the explicit written agreement of MCLM: IEM and NEC. No other warranty, expressed or implied, is made as to the professional advice included in this basic report.

Declaration

NEC is an independent environmental consultancy with no vested interested (either business, financial, personal or other) in the proposed activity proceeding other than remuneration for work performed in terms of the National Environmental Management Act, 1998 (Act 107 of 1998), (NEMA). NEC has signed a declaration of independence in terms of the NEMA regulations, which confirms the company has no vested interest in the proposed project.

MCLM: IEM is responsible in the concluding stages of the planning phase of the project (post issuance of the environmental authorisation) to ensure that all relevant permissions/permits for water use and access have been obtained. Any Town Planning processes and or change in land use/rezoning applications are the responsibility of the applicant and is not addressed through the EIA process.

Relevant Authority and Legislation

The application for environmental authorisation is within the jurisdiction of Gauteng Department of Agriculture and Rural Development (GDARD) and addressed to this authority. This FBAR is prepared and submitted to GDARD for approval.

The development of the new cemetery and waste transfer station is subject to a Basic Assessment (BA), in terms of the National Environmental Management Act, Act 107 of 1998 (NEMA), as amended and Enironmental Impact Assessment (EIA) Regulations of 2014. The EIA Regulations published in Government Notice (GN) R 982 of 4 December 2014 in terms of Section 24 and 44 of NEMA, require that certain listed activities in GN R. 983 and R 985 of 4 December 2014 need environmental authorisation which is obtained through a BA process before the project can be commissioned. This project only triggers activities under GN R. 983.

Table 1: The listed activities triggered under GN R. 983 are as follows:

Government Notice	Relevant notice and Activity	Description of activity
GN. R 983, 4 December 2014	Listing Notice 1 **Activity 23:**	"The development of cemeteries of 2500m^2 or more in size". (Cemetery of approx. 6.4 hectares)
GN. R 983, 4 December 2014	Listing Notice 1 **Activity 27:**	"The clearance of 1 Hectare or more but less than 20 hectares of indigenous vegetation". (Clearance of 8.3 Hectares of indigenous vegetation for WTS and Cemetery)
GN. R983, 4 December 2014	Listing Notice 1 **Activity 56:**	"The **widening of a road by more than 6 metres**, or the lengthening of a road by more than 1 kilometer – (i) Where the existing reserve is wider than 13,5meters (ii) Where no reserve exists, where the existing road is wider than 8metres; (existing road 7.68m wide) excluding where widening or lengthening takes place in urban areas; The existing entrance to the property will be beautified and upgraded to accommodate traffic flow towards both facilities. Phase A of the cemetery will have a tar road network of 895m and Phase B will have a tar road network of 1,102m. The WTS would require a road network of 575m. This road network would extend from the existing entrance road on the property.

Environmental Authorisation Process

The Basic Assessment Process is undertaken for activities that are likely to cause less significant environmental and social impacts. The process is subject to public participation (PPP), application for environmental authorisation and a Basic Assessment Report (BAR). The process requires PPP to be conducted as a way of identifying other issues from Interested and Affected Parties (I&AP's) and

providing an opportunity to comment on documentation for the project. Refer to **Figure 1** overleaf for the process diagramme.

Figure 1: BA Process Diagramme

Permits/license required for the project in terms of other pieces of legislation:

- National Water Act 36 of 1998: Section 21 Water Use License Application for Section 21 (c), (i) and (g);

Background & Development Detail:

This application involves two facilities (i) cemetery and (ii) waste transfer station on one property. The facilities will be developed next to each other. The reason being as follows:

Magaliesburg area falls within the jurisdiction of Mogale City Local Municipality (MCLM). MCLM currently has a formal cemetery, "Magalies Cemetery", along the R509 Magalies/Koster Road some 11km west from Magaliesburg town. This cemetery is rapidly reaching full capacity and needs to be augmented to avoid illegal burial grounds. A new cemetery is being proposed next to existing cemetery.

Additionally, there is an existing landfill site at Ga-Mohale settlement, just west of Magaliesburg town. The local community, town and rural residents' dispose of their domestic and yard waste at this landfill site. Now, a local college has been developed too close to this landfill site, causing some health and environmental concerns. GDARD has called upon MCLM to promptly close the landfill site and establish alternative measures for waste management in the local area. The site can only be closed if an alternative means of waste removal is in place for the area.

MCLM thus proposes to create a waste transfer station to create a link between the existing distant Luiperdvlei Regional landfill site and the local communities which would enable the closure of the existing landfill site at Ga-Mohale.

MCLM proposes to develop a cemetery and waste transfer station on one property known as Portion 22 of the farm Rietpoort 395JQ. This land parcel is municipal owned. The footprint for both facilities will be 8.3 hectares. The transfer station will take up approx. 1.9 Hectares and the cemetery approx. 6.4 hectares. The cemetery will be developed in two sequential phases over a period of more than 10 years.

A cemetery is a familiar concept. Waste transfer stations are not generally familiar concepts and are often confused as dump sites. Overleaf is an information container to assist with the concept.

What is a Waste Transfer Station (WTS)? A transfer station is a facility where solid waste is unloaded from smaller vehicles and reloaded into larger vehicles for transport to a final disposal site.

What happens at a WTS? It is a light-industrial-type facility. Waste collection vehicles discharge their loads so waste can be compacted and then reloaded into larger vehicles for shipment to a final disposal site. The station operators usually move waste off the site in a matter of hours. It serves both rural and urban communities. These are generally fully enclosed.

Who needs a WTS? Communities need transfer stations to move their waste efficiently from the point of collection to distant, regional landfills. The proposed waste transfer station would form the link between the local community and the landfill site.

Detail on the Waste Transfer Facility: The transfer station is a secondary land use in this application to be established on the southern portion of the land parcel next to the R509 Koster-Magaliesburg Road. It is a formally constructed facility enclosed with a high wall. There is a warehouse and access track which will be incorporated as part of the facility infrastructure. It will include:

Main Facility: An area of 1.9ha has been set aside on the study site layout plan for the facility. Components of the facility will include:

- 2.4m High Boundary Brick Wall;
- Gate House with ablution and a sliding gate;
- Store and Ablution Facility (existing warehouse on property will be converted)
- Internal access road (public vehicles-ramp, Collection vehicles- lower access road)
- New asphalt internal impermeable station surface;
- 12 x 20m^3 Bins (for general waste, yard waste, paper, plastic, metal [steel, aluminium], concrete, unfinished wood)
- Raised Ramp of 1: 10 slope central to bins (Public Drop off area);
- Storm water drain around site;
- Berm around site (no storm water may enter the transfer station as surface flow. Berm will divert storm water away from site)
- Internal tar road network of 575 metres.

Volume of waste to be stored at the WTS:

The total volume of waste which can be received on a daily basis at the facility when in full operation would be a maximum of 240m^3. However, initially only 6x20m^3 bins will be placed at the facility. It is anticipated that the facility would not receive more than 60m^3 of waste per day during its first few years of operation.

Detail on the Cemetery: The cemetery will be the primary land use of the property. It will be 6.4 hectares in extent. It will be developed in at least two phases. Phase A will occupy approx. 2.6ha with a proposed tar road network of 895m. Phase B will only commence once Phase A has reached capacity (which will be an excess of 10 years) and will occupy approx. 3.8ha with a proposed tar road network of 1,102m. The cemetery will be located west next to the the existing cemetery. It will progressively expand to the back (north) of the property. The activities will largely take place on the southern extent of Portion 22. It will include:

- Boundary walls,
- Internal access roads,
- Infrastructure (electricity),
- Burial chambers

Parking space for the new cemetery: The parking space in front of the old cemetery will be used and has sufficient space to service the new proposed cemetery.

Access requirement: There is an existing entrance to the study site from the R509 Koster/Magaliesburg Road. This will be beautified and upgraded to accommodate traffic flow towards both facilities. Access control to both facilities is proposed.

Refer to Figure 2 for an indication of proposed development activity positions on Portion 22 of the farm Rietpoort 395JQ.

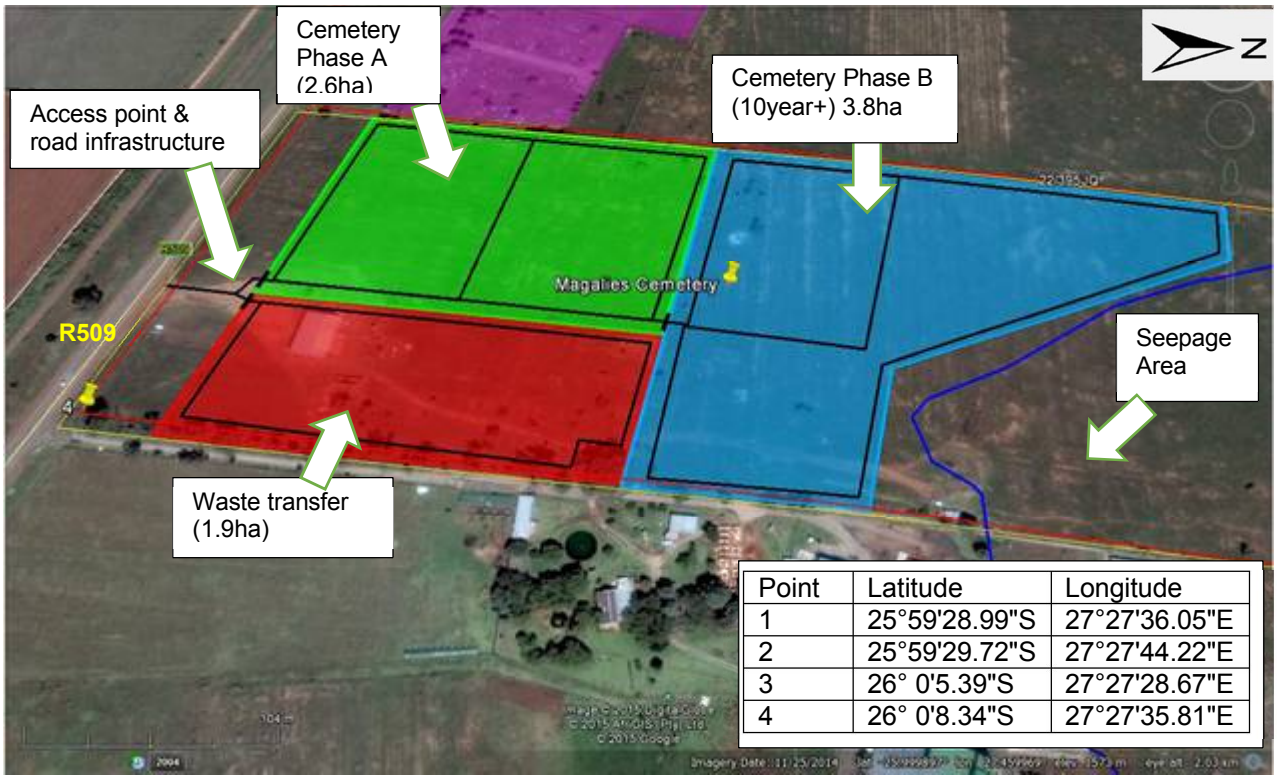

Figure 2: Google Image indicating position of proposed cemetery and waste transfer station

Basic Assessment Report Versions

The BAR & Environmental Management Programme (EMPr) has been prepared in accordance with Regulation 19 and Appendix 1, 4 of the NEMA EIA Regulations 2014.

The BAR has been documented in two versions: (i) Draft / Consultation BAR intended for public review and the (ii) Final BAR intended for submission to GDARD to reach a decision and grant approval for the development.

To begin with, the Draft / Consultation BAR was prepared during August 2015 and made available to all I&Aps and organs of state for an opportunity to comment on the report. The report presented the objective information gathered and assessed during the investigation phase of EIA study. The report was made available for a 30 day public review period from 26 August 2015 – 24/25 September 2015. To further facilitate comments on the Draft / Consultation BAR a public meeting took place on 12 September 2015 at Swallows Inn Guest House during the public review period.

NEC recorded the comments received from the public during the review period and public meeting and have included it in the Final Basic Assessment Report which is now submitted to GDARD for approval.

PUBLIC PARTICIPATION PROCESS UNDERTAKEN FOR THE PROJECT

The public participation process for the project kicked off in June 2015. NEC decided to commence with the public consultation process for the project prior to submission of an application for environmental authorisation to GDARD. This method provided NEC with the opportunity to firstly determine the public views on the project and issues relevant it.

A pre-application site visit took place with GDARD official Mr. Aristopelis (Ari) Kopsosideris on 24 June 2015. The project detail, relevant components and locality were discussed with GDARD. GDARD verified the legal requirements relevant to the project.

NEC conducted consultations with stakeholders, surrounding landowners and interested and affected parties as follows:

- Placement of a newspaper advertisement in the Krugersdorp News on 24 June 2015 to announce the proposed project, intent to apply for environmental authorisation and the public participation process;
- Site notices were posted on site and at public places to inform the community that the site is under application on 24 June 2015; (printed in both Afrikaans and English);
- Stakeholders, organs of state and interested and affected parties who have interest in the proposal were identified;
- Notification letters accompanied by a Background Information Document were sent out to I&AP's, stakeholders to bring the proposal to their attention;
- Notice was given in writing of the proposal to organs of state whom have jurisdiction in the area of the proposal;
- An I&AP register was been opened and maintained;
- A commenting period of 21 days was allowed for on the newspaper advertisement and BID distributed to I&AP's from 24 June 2015 to 14 July 2015;
- Comments, issues and concerns were recorded, responded to during the registration period;

- NEC prepared and submitted an Application for Environmental Authorisation on 27 August 2015 along with a Consultation (Draft) Basic Assessment Report and EMPR for comment to GDARD;
- The Consultation BAR was prepared in August 2015 and made available for public review for 30 calendar days from 26 August 2015 to 24/25 September 2015. Copies of the report were placed at various public venues (Swallows Inn Guest House, the Ubuntu Arts and Crafts Centre/Magaliesburg Library, offices of Naledzi Environmental Consultants CC) to provide the public the opportunity to comment on the CBAR;
- A newspaper advertisement was placed in the Krugersdorp News on 26 August 2015 to announce the availability of the report and also informed the public of a meeting scheduled for the project on 12 September 2015;
- Notification letters and electronic copies of the CBAR & EMPR were emailed to the list of I&APs on the project on 26 August 2015;
- The public was also afforded the opportunity to attend a public meeting for the project, which took place on 12 September 2015 at Swallows Inn Guest House to facilitate comments on the CBAR and transfer project information;
- Issues raised during the public meeting and responses provided thereto by the project team were recorded in meeting minutes which were distributed along with the meeting presentation to the I&AP database of the project on 24 October 2015;

NEXT STEPS IN THE PUBLIC PARTICIPATION PROCESS

- Once GDARD has evaluated the report and reached a decision, all relevant I&AP's/ stakeholders and organs of state will be notified of the decision.

- The Environmental Authorisation (EA) would include the justification for the decision as well as conditions imposed by the authorisation. NEMA allows for a statutory appeal period of 30 days post the issuance of the EA.

COMMENTS FROM I&APs ON THE PROJECT

A number of socio-economic and environmental issues were raised during the public participation process / meeting, these related primarily to social and environmental aspects associated with waste transfer station nl. noise, odour, littering, windblown contamination, health and visual impact. The potential for ground and surface water pollution was a concern with regards to both the cemetery and waste transfer station.

The issue of increased traffic from both facilities was raised by local residents, as it may pose a safety risk to motorists on the R509 Magaliesburg/ Koster Road. This due to vehicles turning off towards the development, traffic congestion at the point of entry to the cemetery as well as parking of vehicles along the R509 to attend funerals. Yet, the Mogale City Local Municipality states that the parking space in front of the old cemetery is sufficient to service the new cemetery.

The public in general supports the development of the new Magalies Cemetery if management measures are implemented to lower the traffic impact currently experienced from the existing cemetery and anticipated increase in traffic from the new facility.

The overall sentiments of the local public towards the waste transfer station are one of skepticism. The local community is skeptic on the local authority's capability to operate and manage the waste transfer station to standard and to implement good housekeeping measures.

The visual impact due to littering, windblown contamination, potential health impacts and odour is of main concern. The community feels the transfer station can easily be mismanaged, become overfilled and ultimately turn into a dump site. They anticipate the facility becoming a nuisance and an eyesore in the local area culminating in a negative impact on tourism facilities of the local area. NEC recorded the issues and arranged a public meeting to provide clarity on the waste transfer station and its operational procedures. The public meeting took place on 12 September 2015.

The outcome of the public meeting was that the community/attendees would welcome this facility, but it must be planned in conjunction with a new landfill site for the area. The waste transfer station is considered a short term solution (high capital expenditure-short term solution) and should in the long term form part of several waste management infrastructures supporting/forming a link with a landfill site in the area. It was also put forward by local guest house owner that the waste transfer station be moved to the back of the cemetery to lower the potential negative visual impact that could prevail due to an overfilled facility. This will lower the visual perception/impact from/on motorists, tourists and the guest house.

The applicant indicated that the waste transfer station will be enclosed with a 2.4m high wall to screen the facility operations and have undertaken to remove the waste at the transfer station on a daily basis. The transfer station is also placed along the R509 for ease of access and to capitalise of the existing warehouse on the property which will form part of the transfer station infrastructure. The location for the transfer station was therefore not changed as it current position on site is favoured by the applicant.

The issues raised during the public meeting were recorded and responses provided thereto by the EAP and the applicant. The minutes were distributed to the project I&AP database.

Organs of state were also consulted during the BA process which included:

Organs of State consulted during the Draft BAR public review period:

No	Department	Comments received on draft BAR	
1	GDARD	√	9 October 2015
2	Department of Water & Sanitation	√	30 September 2015
3	Gauteng Provincial Heritage Authority (PHRA)	X	None received within comment period
4	Gauteng Dept. Public Transport, Roads and Works (DPTRW)	√	12 October 2015

The above comments received from organs of state have been included in the Final BAR. These are attached under Appendix E7 – Comments from I&Aps on BAR.

GDARD COMMENTS ON DRAFT BAR

According to GDARD's GIS system the central portion of the project site corresponds to primary vegetation, red listed bird habitat, a non-perennial river within an Agricultural Hub.

A. Different site layouts must be considered to locate the development on least sensitive parts of the project site to minimize environmental impacts. Due consideration is required to reduce threat to Red Listed bird habitat.

✓ No alternative site layout plans were considered. The findings of the EAP, specialist studies and geotechnical investigation paired with the project site existing infrastructure formed the basis of the design and planning of the current site layout plan. It is considered the optimal use of the project site with due consideration of the environmental features on site. The red listed bird habitat would correspond to the good state rocky grassland and wetland with associated moist grassland in the central portion of the site. This area is being conserved in the project site plan. Only the southern extent of the site is being development with the cemetery and waste transfer station. The wetland, seepage area, area as depicted difficult to excavate and the good state rocky grassland and moist grassland will not be developed.

B. Comments and Recommendations listed in the studies undertaken by specialists including floodline investigations and geological studies must be incorporated in the BAR. Mitigation measures must be listed in the EMPR.

✓ A floodline determination for the study site was not undertaken. A Wetland Assessment Report and functional assessment was commissioned to delineate the different zoned of the wetland and prescribe a recommended buffer zone. A 32m buffer zone was recommended, yet a 100m buffer is provided for.

✓ The Geotechnical Investigation delineated the areas which are difficult to excavate and the seepage area which is to be excluded from the development. It has been indicated in the BAR and such areas have been excluded from the site plan footprint area; prescribed mitigation measures have been listed in the EMPr.

C. Significance ratings of impacts need to be reviewed in light of additional requirements as listed. Noted.

D. A development layout depicting all the proposed activities overlain over all sensitivities and meeting the requirements of the sensitivity mapping rules of GDARD is required and must be included in the final BAR. A composite sensitivity map must also contain a legend and provide the scale. Noted and included under Appendix A

E. The site specific EMPr must be updated to incorporate any changes resulting from the steps taken to include recommendations provided by specialists. The content of the EMPr must be in line with Appendix 4 of the EIA Regulations of 2014. Noted.

F. All the public participation process information must be appended to the final BAR in the appropriate appendices. Queries emanating from the public participation process must be addressed in the final BAR to avoid delays on the reviewing of the application. Noted.

ALTERNATIVES CONSIDERED FOR THE PROJECT

Location: No location alternatives were considered for the location of the facilities. Portion 22 of the farm Rietpoort 395JQ is owned by the applicant and considered a natural flow area for a new cemetery as it would augment the old/existing Magalies cemetery. The waste transfer station requires road frontage offered along the R509. The land parcel opted already has existing structures which can be used for the waste transfer station.

Different site layout plans: Mogale City Local Municipality did not present alternative site layouts. MCLM awaited the results of all specialists' studies to delineate any environmentally sensitivity areas which need to be avoided by the cemetery and waste transfer station before designing a site layout plan. It therefore has no versions/alternatives as it conforms to the outcomes and recommendations made in the geotechnical investigation, wetland delineation as well as the ecological assessment.

Besides; the new cemetery will augment old cemetery and is logically being positioned in the site layout plan next to it. The new cemetery would be reliant on the parking facilities provided in the park erf in front of the old cemetery along the R509.

Further in terms of the waste transfer station; there is an existing warehouse building on the project site and it is the aim of MCLM to capitalise of existing structures on the project site which can be utilised as part of the facility. The waste transfer station position was therefore reasonably placed to correspond to such and in favour of the road frontage and existing entrance.

Therefore no alternative site layout plans were considered. It is considered the optimal use of the project site with due consideration of the environmental features on site.

COMPLIANCE WITH THE BA PROCESS REGULATED TIMEFRAMES

The Application for Environmental Authorisation was submitted on 27 August 2015 to GDARD. The Basic Assessment Report was made available for public review from 27 August 2015 to 24/25 September 2015 for a 30 calendar day public review period. Regulations require that the BAR is submitted within 90 days of application submission. The final BAR is being submitted within 60 days of application submission

EAP Recommendation

NEC believes that the EIA process for the proposed facilities fulfills the process requirements of the current EIA Regulations of 2014. Issues and associated impacts pertaining to the facilities have been investigated by the EAP and where specialist inputs were required such were obtained and impacts investigated further through a Geotechnical Investigation, Wetland Delineation, Ecological Assessment, Geohydrological Investigation and a Heritage Impact Assessment. Extensive efforts were made to identify and involve potential affected parties during the public participation process. The public has been afforded opportunities to participate in the BA process. Comments solicited during this process have been recorded and considered.

NEC believes that all environmental sensitive areas have been identified, delineated through specialist inputs and excluded from the development footprint. The site plan set out on the project site is considered environmentally feasible. The impacts associated with the facilities have been scoped and assessed. The cemetery is not considered of major concern and has few issues and management measures which need to be implemented. These are prescribed in the EMPr.

The waste transfer station would be located in a rural landscape scattered with tourism facilities. NEC believes that the facility type, being a waste transfer station, not a landfill site, would be in line with the surrounding land uses ***if operated and managed according to best practice*** and if ***strict Good House Keeping rules are implemented***. The main objective is to remove daily waste intake to the Luiperdsvlei Regional Landfill Site at the end of each business day. MCLM has undertaken to implement such. Operation of the transfer station should be limited from Monday-Fridays 08:00 to 17:00. The facility can be open to the public on Saturdays to solely receive drop-offs not compact and remove waste due to anticipated noise. Saturday operation would limit illegal dumping in front of the facility during weekends.

The site locality is considered feasible albeit; if the facility is not operated, managed according to the EMPr and MCLM's is not acting according to its undertaking then the waste facility is not considered feasible within this rural-agricultural-tourism landscape. Thus onus is on the applicant to comply with all its legal obligations in terms hereof and to ensure that the facility is managed according best practice.

In the long term MCLM is to identify and establish a new local landfill site for the area to prohibit overfill at the waste transfer station as a result of increased settlement development activities and waste contributors. This was also the sentiment of the public at the public meeting for the project which served to facilitate comments on the BAR.

GAUTENG PROVINCE
AGRICULTURE AND RURAL DEVELOPMENT
REPUBLIC OF SOUTH AFRICA

Basic Assessment Report in terms of the National Environmental Management Act, 1998 (Act No. 107 of 1998), as amended, and the Environmental Impact Assessment Regulations, 2014 (Version 1)

Kindly note that:

1. This **Basic Assessment Report** is the standard report required by GDARD in terms of the EIA Regulations, 2014.

2. This application form is current as of 8 December 2014. It is the responsibility of the EAP to ascertain whether subsequent versions of the form have been published or produced by the competent authority.

3. **A draft Basic Assessment Report must be submitted, for purposes of comments within a period of thirty (30) days, to all State Departments administering a law relating to a matter likely to be affected by the activity to be undertaken.**

4. **A draft Basic Assessment Report (1 hard copy and two CD's) must be submitted, for purposes of comments within a period of thirty (30) days, to a Competent Authority empowered in terms of the National Environmental Management Act, 1998 (Act No. 107 of 1998), as amended to consider and decide on the application.**

5. Five (5) copies (3 hard copies and 2 CDs-PDF) of the final report and attachments must be handed in at offices of the relevant competent authority, as detailed below.

6. The report must be typed within the spaces provided in the form. The size of the spaces provided is not necessarily indicative of the amount of information to be provided. The report is in the form of a table that can extend itself as each space is filled with typing.

7. Selected boxes must be indicated by a cross and, when the form is completed electronically, must also be highlighted.

8. An incomplete report may lead to an application for environmental authorisation being refused.

9. **Any report that does not contain a titled and dated full colour large scale layout plan of the proposed activities including a coherent legend, overlain with the sensitivities found on site may lead to an application for environmental authorisation being refused.**

10. The use of "not applicable" in the report must be done with circumspection because if it is used in respect of material information that is required by the competent authority for assessing the application, it may result in the application for environmental authorisation being refused.

11. No faxed or e-mailed reports will be accepted. Only hand delivered or posted applications will be accepted.

12. Unless protected by law, and clearly indicated as such, all information filled in on this application will become public information on receipt by the competent authority. The applicant/EAP must provide any interested and affected party with the information contained in this application on request, during any stage of the application process.

13. Although pre-application meeting with the Competent Authority is optional, applicants are advised to have these meetings prior to submission of application to seek guidance from the Competent Authority.

DEPARTMENTAL DETAILS

Gauteng Department of Agriculture and Rural Development
Attention: Administrative Unit of the of the Environmental Affairs Branch
P.O. Box 8769
Johannesburg, 2000

Administrative Unit of the of the Environmental Affairs Branch
Ground floor Diamond Building
11 Diagonal Street, Johannesburg

Administrative Unit telephone number: (011) 240 3377
Department central telephone number: (011) 240 2500

(For official use only)

NEAS Reference Number:						
File Reference Number:						
Application Number:						
Date Received:						

If this BAR has not been submitted within 90 days of receipt of the application by the competent authority and permission was not requested to submit within 140 days, please indicate the reasons for not submitting within time frame.

This is the Final Basic Assessment Report (FBAR) which is being submitted to GDARD for decision making within the regulated time frame of 90 days. The Application for Environmental Authorisation was submitted simultaneous with the CBAR to GDARD on **27 August 2015**.

The final BAR is submitted within 60 days post application submission to GDARD for approval.

The EAP and Applicant are well within the regulated time frame of 90 days.

Is a closure plan applicable for this application and has it been included in this report? N/A

if not, state reasons for not including the closure plan.

A Closure Plan is not applicable to this application (cemetery and WTS). The proposed WTS is required in the study area as there will be no other waste facilities post closure of the GA-Mohale Landfill site. Should MCLM decide in years to come to decommission the facility an EAP must be appointed for the decommissioning and to prepare a closure plan. The cemetery land use is considered permanent. Decommissioning and relocation of such facilities are highly unlikely.

Has a draft report for this application been submitted to a competent authority and all State Departments administering a law relating to a matter likely to be affected as a result of this activity? YES

Is a list of the State Departments referred to above attached to this report including their full contact details and contact person? YES

If no, state reasons for not attaching the list.

This final BAR & EMPr was made available for public review for 30 calendar days to I&APs including state departments from 26 August 2015 – 24/25 September 2015 and GDARD as per requirements of Regulation 19, 43&44 of the NEMA EIA Regulations of 2014. Comments received from organs of state are included in this final BAR.

Have State Departments including the competent authority commented? **YES**

If no, why? **(Here is the list of Departments who commented/should have commented)**

No	Department	Comments received on draft BAR	
1	GDARD	√	9 October 2015
2	Department of Water & Sanitation	√	30 September 2015
3	Gauteng Provincial Heritage Authority (PHRA)	X	None received within comment period
4	Gauteng Dept. Public Transport, Roads and Works (DPTRW)	√	12 October 2015
5	West Rand District Municipality	X	None received within comment period

SECTION A: ACTIVITY INFORMATION

1. PROPOSAL OR DEVELOPMENT DESCRIPTION

Project title (must be the same name as per application form):

A. Project Title

Proposed development of the Magalies Cemetery and Waste Transfer Station, Portion 22 farm Rietpoort 395JQ, west of Magaliesburg, Mogale City Local Municipality, West Rand District, Gauteng Province

B. Proponent

Mogale City Local Municipality (MCLM) is the applicant for environmental authorisation and will commission the proposed activities.

C. Project Description and Location

Waste Transfer Station: The existing GA-Mohale Landfill site is located just west of Magaliesburg town, some 11km east of the proposed application area/study site. Recently, a local college was developed too close to this landfill site, causing some health and environmental concerns. GDARD has called upon MCLM to promptly close the landfill site and establish alternative measures for waste management in the local area. MCLM thus proposes to create a waste transfer station to create a link between the existing distant Luiperdvlei Regional landfill site and the local communities. This will facilitate the closing off and rehabilitation of the Ga-Mohale landfill site. (The decommissioning of the landfill does not form part of this EIA study).

Cemetery: The upgrading of cemeteries around Mogale City are prompted by illegal burial grounds which exist in the area. The existing Magalies cemetery at Rietpoort, is to reach its full capacity. A new cemetery is proposed to address the need for further committal grounds in the area and to augment existing public amenity.

Portion 22 of the farm Rietpoort 395JQ has been identified for both the cemetery and waste facilties which is next to the R509 Koster/Magaliesburg Road. This land is owned by the MCLM. The existing Magaliesburg cemetery is situated west adjacent to the site.

D. Details of Cemetery and Waste Transfer Station

The study site is 25.656 ha in extent. The proposed activities would only occupy 8.3ha (34%) of the land parcel. This affects the southern extent of the study site. The extent of the activities are:

- Cemetery extent: approx. 6.4 hectares. (25.6% of land parcel)
- Waste transfer station extent: 1.9 hectares (7.6% of land parcel)

The development site consists of environmental features such as a wetland, seepage area, and good state rocky grassland in its central part and an area described as difficult to excavate which has been excluded from the development site plan.

CEMETERY:

The cemetery will be established on the southern extent of the land parcel west next to and behind the transfer station; adjacent to the existing Magalies cemetery. It will be a new cemetery separately fenced from the existing Magalies cemetery. It will be developed in at least two phases. Phase A will occupy approx. 2.6ha with a proposed tar road network of 895m. Phase B will only commence once Phase A has reached capacity (which will be an excess of 10 years) and will occupy approx. 3.8ha with a proposed tar road network of 1,102m. It will progressively expand to the back (north) of the property. It will include:

- Boundary walls, (border the extent of the cemetery-Refer to Figure 3)
- Internal access roads,
- Infrastructure (electricity),
- Burial chambers

Adequate parking is available in front of the old/existing cemetery for the new proposed cemetery.

The process would include gradual removal of vegetation to create burial chambers, digging of graves, burying of corpses and subsequent thereto slow decaying of corpse beneath the surface. Areas around the chambers would be landscaped and maintained.

Appearance will be similar to the existing Magalies Cemetery. The proposed cemetery will be fenced off with a controlled access point. Remaining land (69%) that is affected by a seepage area, drainage area and area that has been depicted as difficult for excavations (**See Appendix A Site Plan**) will remain vacant and is to be used for agricultural purposes. The status quo land use is grazing.

Figure 3 : Concrete pallisade fence – For the cemetery boundary wall

WASTE TRANSFER STATION:

This is an enclosed "temporary" waste storage facility. No handling of waste is undertaken at this facility. It is to be developed next to the R509 Koster-Magaliesburg Road. One of the requirements of a waste transfer station is ready access to travel routes/roads. There is a warehouse and access road which will be incorporated as part of the facility infrastructure.

(temporary refers to being removed at the end of each business day)*

The extent of the facility will be 1.9 ha.

i. Infrastructure:

- 2.4m High Boundary Brick Wall;
- Gate House with ablution and sliding gate;
- Store and Ablution Facility (the conversion of the existing warehouse for these facilities is an option)
- Internal access road (public vehicles-ramp, Collection vehicles- lower access road)
- New asphalt internal impermeable station surface;
- 12 Bins (ultimate design capacity)
- Raised Ramp of 1: 10 slope central to bins (Public Drop off area);
- Storm water drain around site;
- Berm around site (no storm water may enter the transfer station as surface flow. Berm will divert storm water away from site)
- Internal tar road network of 575 metres.

The GDARD compiled a General Waste Management Facility Standard Guideline (2009). As per this guideline an earth berm and cut off drain should be constructed outside along the perimeter fence/wall. The combination is required to assist with management of stormwater during the operation of the facility. It is a requirement in terms of the above mentioned guideline that no stormwater may enter a waste transfer station as surface flow. The earth berm/drain will thus divert storm water away from the facility.

The facility will be enclosed by a 2.4 m high brick wall for security purposes and also to screen the facility from motorists and surrounding landuses/owners. Additional screening can be implemented by planting indigenous trees/shrubs along the perimeter. This could also serve a wind brakes.

The facility will be designed to have asphalt, concrete slabs and paving in other areas. Surfaces will be impervious. A grease trap will be situated at the lowest point of the site. All stormwater and water from hosing down the tipping floor will flow to the grease trap. Water from the grease trap would either flow to a septic tank/other container. The septic tank/other container will be emptied by the municipal sewage service provider for disposal at the Municipal Sewage works.

ii. Design / Storage Capacity/Waste types

The ultimate design capacity of the facility will cater for 12 bins. Initially only 6 bins of 20m^3 each will be placed at the facility. It is anticipated that the facility would not receive more than 60m^3 of waste per day. This volume is sufficient for the local area and caters for emergency waste storage capacity as well.

The type of wastes to be stored on site includes general waste, yard waste, paper, plastic, metal [steel, aluminum], and concrete, unfinished wood.

iii. Facility process

All Municipal vehicles will collect waste from the Magaliesburg area including compactors and

will take waste to the proposed Magalies Waste Transfer Station. The residents & business will also have access to the facility. The process at the facility entails receiving waste from customers and disposing it into containers. Once the container is filled it will be transported to Luipaardvlei landfill site by MCLM vehicles.

The facility will as mentioned include a raised ramp of approx. 62m in length, 6.4m in width and 1.5m in height. Initially three waste bins will be placed on either side of the raised ramp, later increasing to six bins. Vehicles will travel up the ramp to load waste into the bins as the ramp and top of bin would be at the same level. Waste collection vehicles would travel around the ramp to load and off load bins.

Vehicles would need to enter the facility through a formal security gate.

iv. Access control

The facility will have an access controlled gate and guard house. The gate will be locked at all times outside of operating hours. During operating hours the gate will be operated by a security officer.

There is an existing access point and road to the site from the R509_Koster/Magaliesburg Road. The existing entrance to the property will be beautified and upgraded to accommodate traffic flow towards both the cemetery and waste transfer station. Access control to both facilities is proposed.

Bin removal vehicles will enter the site in a demarcated lane which will route the vehicles around the ramp area, and cars will enter the site in a demarcated lane which will route the cars onto the ramp. Lanes will lead cars and bin removal vehicles until exiting the site.

v. Waste Pickers

Waste Pickers and/or private recyclers will not be allowed to collect any wastes from this facility. Waste received on a daily basis will be removed to the regional land fill site. Although wastes could be a source of income to private recyclers and pickers, this will not be allowed, as the risk of the site becoming uncontrolled is too high. The site will be walled off and have a security access.

vi. Operating hours

MCLM will operate and manage the site. Operating hours are anticipated as weekdays from 08h00 – 17h00. It was mentioned at the public meeting on 12 September 2015 by MCLM and a member of the public that Saturdays are usually the most essential operating day for public drop-off at the WTS. It can therefore be suggested that the WTS should be open for public vehicles to drop off waste on Saturdays from 08h00 – 12h00. Municipal vehicles would however not operate and collect waste on Saturdays. Sundays and public holidays will be excluded from the operational days.

vii. Waste Collection Frequency

Bins will be emptied on a daily basis and waste will be transported for final disposal to the

Luiperdsvlei landfill site. MCLM anticipates removing 90% of the incoming waste per day from the waste transfer station to the regional landfill site. A bin removal vehicle will make a minimum of 3 trips every day to the regional landfill site, leaving not more than 10% of waste overnight at the WTS.

viii. Operation and Management of facility

MCLM will be responsible for the construction of both the cemetery and waste transfer facility. MCLM will manage the cemetery. The municipality would also manage and operate the waste transfer station.

Select the appropriate box

The application is for an upgrade of an existing development		**The application is for a new development**	**X**	Other, specify	

Does the activity also require any authorisation other than NEMA EIA authorisation?

YES	~~NO~~

If yes, describe the legislation and the Competent Authority administering such legislation

Item A: Water Use License Application (WULA) in terms of Nation Water Act, 1998

The development is proposed within 500m of a delineated unchannelled valley bottom wetland. The applicant requires a Water Use License due to the proximity of the development to the wetland. There may also be a need to registered MCLM as a water user should they source water for the facilities from the existing borehole on site.

Also, the Department of Water and Sanitation (DWS) have indicated in their comments on the BAR dated 30 September 2015, that the installation of a grease trap and disposing of water from the grease trap into a septic tank at the Waste Transfer Station will require a Section 21 (g) water use to be included on the WULA for the project.

A Water Use License Application (WULA) will be submitted to Department of Water and Sanitation (DWS) as per the Section 21 water uses of the National Water Act, 1998.

- Section 21 (c): Impeding or diverting the flow of water in a watercourse; and
- Section 21 (i): Altering the bed, banks, course or characteristics of a watercourse
- Section 21 (g): Disposing of waste in a manner which may detrimentally impact on a water resource

Proof of WULA submission will be made available to GDARD, one the application is finalised and submitted to DWS..

Item B: Section 38 statutory comment in terms of National Heritage Resources Act, 1999

Statutory comment is required in terms of Section 38 for development in terms of the National Heritage Resources Act, 25 of 1999. A Phase 1 Heritage Impact Assessment Report (HIA) was conducted for the development site. No heritage features were found on study site.

The BAR and HIA for the project was submitted to Gauteng Provincial Heritage Resource Agency (GPHRA) and South African Heritage Resources Agency (SAHRA) via their SAHRIS online application system.

No comments were received on the BAR during the public review period from either of the heritage authorities. This is however not significant as no resources exist on site.

If yes, have you applied for the authorisation(s)? (**only applicable to WULA)**	~~YES~~	**NO**
If yes, have you received approval(s)? (attach in appropriate appendix)	~~YES~~	**NO**

2. APPLICABLE LEGISLATION, POLICIES AND/OR GUIDELINES

List all legislation, policies and/or guidelines of any sphere of government that are applicable to the application as contemplated in the EIA regulations:

Title of legislation, policy or guideline:	Administering authority:	Promulgation Date:
National Environmental Management Act, 1998 (Act No. 107 of 1998 as amended).	National & Provincial DEA & GDARD	27 November 1998
Environmental Impact Assessment Regulations, 2014	National & Provincial DEA & GDARD	4 December 2014
National Environmental Management: Biodiversity Act, 2004 (Act 10 of 2004)	DEA	07 June 2004
National Water Act, 1998 (Act 36 of 1998)	Department of Water & Sanitation	26 August 1998
National Heritage Resources Act, 1999 (Act 25 of 1999)	South African Heritage Resources Agency Gauteng Provincial Heritage Resources Agency	28 April 1999
Occupational Health and Safety Act, 1993 (Act 85 of 1993)	Department of Health	23 June 1993
Conservation of Agricultural Resources Act, 1983 (Act 43 of 1983)	DAFF Gauteng Department of Agriculture	1983
Hazardous Substances Act, 1973 (Act 15 of 1973)	Department of Health	1973
National Road Traffic Act, 1996 (Act 93 of 1996)	Gauteng Department of Public Transport, Roads and Works	1996
Transvaal Nature Conservation Ordinance Act No. 12 of 1983	GDARD	1983
National Environmental Management: Waste Act, 2008 (Act 59 of 2008)	GDARD	2008
General Waste Management Facility Standards Guideline Document – Guideline Schematic Layouts v14	GDARD	9 March 2009

Description of compliance with the relevant legislation, policy or guideline:

Legislation, policy of guideline	Description of compliance
National Environmental Management Act, 1998 (Act No. 107 of 1998 as amended). - NEMA	NEMA requires that no listed activities may be undertaken without Environmental Authorisation. An application for environmental authorisation has been submitted to GDARD to seek authorisation for the development of the cemetery & waste transfer station. A Basic Assessment (BA) has been followed, in

	terms of the National Environmental Management Act, Act 107 of 1998 (NEMA), as amended and Enironmental Impact Assessment (EIA) Regulations of 2014.
Environmental Impact Assessment Regulations, 2014 – EIA Regulations	An Application for EA was submitted in terms of Regulation 16. A Basic Assessment Process is followed in accordance to Regulation 19 of the EIA Regulations of 2014. I&AP's are provided with an opportunity to comment on the Basic Assessment Report in accordance regulation 19 (1)(a); 43 (1) & (2), Regulation 40 & 41. NEC has recorded comments of I&Aps, organs of state in BAR in accordance to Regulation 44.
National Environmental Management: Biodiversity Act, 2004 (Act 10 of 2004) (NEMBA)	Provides for management and conservation of South Africa's biodiversity within the framework of the protection of species and ecosystems that warrant national protection and the sustainable use of indigenous biological resources The site was surveyed for protected species, orange and or red listed species. The site includes localized sensitivities such as declining plant species. The site is not within a listed ecosystem as protected by NEMBA. A number of threatened and provincially protected plant species were recorded on the site. These species should be removed and relocated to suitable habitat outside of the construction footprint or used as part of rehabilitation of disturbed areas. (Permission of the provincial authority will be sought). NEMBA is the most recent legislation pertaining to alien invasive plant species. Category 1b Alien plant species were identified on the study site. These species require compulsory control (remove&destroy). Mitigation measures are proposed in this BAR and EMPr indicating these species should be destroyed and their re-emergence monitored.
National Water Act, 1998 (Act 36 of 1998) - NWA	This act calls for prevention and remedying the effects of pollution and control of emergency incidents. Also protected and manages water sources and resources.

<table>
<tr><td></td><td>A Wetland Delineation was conducted for the study site. A wetland was delineated and found to be within 500m of the proposed activities. A Section 21 (c), (i) and (g) water use license application is to be submitted to DWS for approval. The moist wetland grass is also considered as a watercourse and protected by NWA. These areas will be protected by a 32m buffer zone. No development will take place below the 1: 100 floodline or on the moist grassland.

A Geohydrological Assessment was conducted and determined a low potential for groundwater pollution from the cemetery.</td></tr>
<tr><td>National Heritage Resources Act, 1999 (Act 25 of 1999) - NHRA</td><td>Provincial heritage resources authorities must be notified of a proposed project and must be consulted during the HIA process. No heritage features were recorded on site. A Heritage Impact Assessment was conducted for the site. Section 38 statutory comment in terms of NHRA was sought from SAHRA and GPHRA via the submitted HIA report.</td></tr>
<tr><td>Occupational Health and Safety Act, 1993 (Act 85 of 1993) - OHSA</td><td>The act deals with the prevention of occupational accidents and injuries. The EMPr for this project will include measures to improve health and safety during construction of the facilities and operation/management.</td></tr>
<tr><td>Conservation of Agricultural Resources Act, 1983 (Act 43 of 1983) - CARA</td><td>The National Department of Agriculture has identified the following soil forms and criteria for high potential agricultural land within Gauteng:
Agricultural land is considered to be of high potential if it may be cultivated in terms of Part 1 of the regulations of Conservation of Agricultural Resources Act 43 of 1983, and is-
under permanent irrigation, or
can be classified into one of the soil forms listed in the table below, and
the effective soil depth is equal to or greater than the minimum as stated in the table below, and
the average topsoil clay content falls within the limits as stated in the table below.
<table>
<tr><th>Qualifying Soil Forms</th><th>Mini Effective soil depth</th><th>Topsoil Clay content</th></tr>
<tr><td>Avalon, Bainsvlei, Bloemdal, Clovelly, Glencoe, Hutton, Oakleaf, Pinedene, Shortlands, Tukulu</td><td>900 mm</td><td>10 – 35%</td></tr>
</table>
</td></tr>
</table>

	The Gauteng Agricultural Potential Atlas (GAPA 4) was checked to determine the study site's agricultural potential. The site is considered of high agricultural potential. It does fall within an Agricultural Hub south and west of the R24 Road. The area is focused on agricultural development/rural agriculture as per the local authority SDF. The site is not cultivated only supports grazing for cattle. No activity listed in terms of Geographical areas is triggered though.
Hazardous Substances Act, 1973 (Act 15 of 1973) - HSA	Provides for the definition, classification, use, operation, modification, disposal or dumping of hazardous substance. No hazardous substances will be accepted at the waste transfer facility, however use of such during construction period of the facilities such be managed according to HAS. This is addressed in the EMPr.
National Road Traffic Act, 1996 (Act 93 of 1996) - NRTA	The act relates to road safety. There is an existing access point from the R509 Koster/Magaliesburg Road to the study site. The existing entrance would beautified and upgraded and would provide access to both the cemetery and waste transfer station. The Gauteng Department of Public Transport, Roads and Works were part of the organs of state which was consulted as part of the project for this matter.
Transvaal Nature Conservation Ordinance Act No. 12 of 1983 - TNCOA	A number of plant species listed in the TNCOA are provincially protected. These plants are not to be removed, damaged, or destroyed without permit Authorisation from GDARD. Of the species listed by the Ordinance, two *Gladiolus* species, an orchid species (*Habenaria* cf *epipactideae*) and *Eucomis autumnalis* were confirmed to occur in the grasslands on site.
National Environmental Management: Waste Act, 2008 (Act 59 of 2008) - NEMWA	MCLM has a general duty to avoid generation of waste and if not avoided minimise and management such accordingly. It is the responsibility of the person generating the waste to ensure that the waste is treated and disposed of in an environmentally sound manner. MCLM is proposing a waste transfer station to manage waste within their area of duty. Management measures are proposed within the EMPr for minimize and management waste during construction and operation of the facilities.
General Waste Management Facility Standards Guideline Document -	It is a requirement ito the GWMFS that no stormwater may enter a waste transfer station as

GWMFS	surface flow. An earth berm/drain is proposed to divert stormwater away from the facility.
National Environmental Management: Air quality Act:	Measures are being proposed to control dust, noise and odour during the construction phase of the facilities. Measures in specific are being proposed to control such nuisance impacts during the operation of the WTS.

3. ALTERNATIVES

Describe the proposal and alternatives that are considered in this application. Alternatives should include a consideration of all possible means by which the purpose and need of the proposed activity could be accomplished. The determination of whether the site or activity (including different processes etc.) or both is appropriate needs to be informed by the specific circumstances of the activity and its environment.

The no-go option must in all cases be included in the assessment phase as the baseline against which the impacts of the other alternatives are assessed. **Do not** include the no go option into the alternative table below.

Note: After receipt of this report the competent authority may also request the applicant to assess additional alternatives that could possibly accomplish the purpose and need of the proposed activity if it is clear that realistic alternatives have not been considered to a reasonable extent.

Please describe the process followed to reach (decide on) the list of alternatives below

Mogale City Local Municipality did not present alternative site layouts or consider an alternative locality for the activities.

No location alternatives were considered. In terms of the new cemetery:
The proposed project site is owned by the MCLM. The existing Magalies Cemetery is located directly west adjacent to the project site. The new cemetery will augment the existing facility and its location is considered a natural flow area.

Waste Transfer Station:
The existing landfill site at GA-Mohale settlement is causing environmental and health issues and GDARD has called upon MCLM to close and rehabilitate this landfill site. The directive by GDARD is to promptly close the facility. There will be no other waste management facilities in the area accept for the Luiperdsvlei regional landfill site some 40km away.

To development another landfill site for the area at a different location involves site selection, planning and obtaining permits which cannot be achieved in a short time period if MCLM wishes to abide by the directive.

MCLM will establish a waste transfer station to service and link the rural area to the regional landfill site instead of creating a new landfill site. The WTS is proposed on MCLM property along the R509 for ease of access by the local community and municipal vehicles offloading and loading waste. It would assist the community to dispose of waste closer to area of residence which is then removed by the municipality to a registered landfill site. No location/site alternatives are proposed.

The planning, construction and obtaining of authorisation for a waste transfer station is speedier and more cost effective for MCLM. It has been indicated that cleaning/ clearing of illegal dumping areas is more costly for municipality if no such facilities exist than operating a transfer station.

Design considerations were weighed to lower potential nuisance impacts and negligible pollution risks relevant to the waste transfer station.

The current design caters for 12 waste bins (initially 6 bins) along a raised ramp for public vehicles. The bins and ramp in the design are not roofed or protected from direct sunlight, rain.

The design can be altered. The ramp and concrete slabs were waste skips/bins will be stored can be roofed with a corrugated iron roof. This will prevent rainwater from entering bins, it will also provide shade. Resulting in less water and sunlight exposure which will prevent bad odour.

This will not influence the footprint size of the facility it can be included as a mitigation measure to curb potential nuisance impacts and negligible pollution risks.

Provide a description of the alternatives considered

No.	**Alternative type**, either alternative: site on property, properties, activity, design, technology, energy, operational or other(provide details of "other")	**Description**
1	Proposal	A new cemetery will be developed to augment the existing Magaliesburg Cemetery. It will be approx. 6.4 ha in size. It will comprise boundary walls, internal access roads, and infrastructure and burial chambers. A formally constructed and enclosed waste transfer station is proposed of 1.9ha. It comprises: • 2.4m High Boundary Brick Wall; • Gate House with ablution and sliding gate; • Store and Ablution Facility • Internal access road • New asphalt internal impermeable station surface; • 12 Bins (initially 6 Bins) • Raised Ramp of 1: 10 slope central to bins (Public Drop off area); • Storm water drain around site; • Berm around site (no storm water may enter the transfer station as surface flow. Berm will divert storm water away from site) The raised ramp and bins are not covered by a roof or protected from direct sunlight, rain.
2	Alternative 1 **This is a rather considered a mitigation than feasible alternative.**	The ramp and concrete slabs were waste skips/bins will be stored can be roofed with a corrugated iron roof. This will prevent rainwater from entering bins, it will also provide shade. Resulting in less water and sunlight exposure which will prevent bad odour.
~~3~~	~~Alternative 2~~	
	~~Etc.~~	

In the event that no alternative(s) has/have been provided, a motivation must be included in the table below.

Mogale City Local Municipality is the owner of the proposed development site which is a locality determining factor. They have not considered different localities for the cemetery and

waste transfer station. The proposed Magalies Cemetery is to be located next to the existing Magaliesburg cemetery. It will augment the existing facility.

The waste transfer facility is designed according to best practice to make the facility accessible and impermeable for pollution. It also accommodates the requirements of the GDARD General Waste Management Facility Standard Guideline (2009). The inclusion of a corrugated iron roof over the bins and ramp are rather considered mitigation than an alternative.

Site features which require consideration:
According to GDARD GIS database system the project site corresponds to primary vegetation, red listed bird habitat and non-perennial river in the central part of the site in an Agricultural Hub.

Consideration of Site Plan Alternatives: In relation to environmental sensitivities
Mogale City Local Municipality did not present alternative site layouts. MCLM awaited the results of all specialists' studies to delineate any environmentally sensitivity areas which need to be avoided by the cemetery and waste transfer station before designing a site layout plan. It therefore has no versions/alternatives as it conforms to the outcomes and recommendations made in the geotechnical investigation, geohydrological investigation, wetland delineation as well as the ecological assessment.

The site consists the following environmental features delineated by specialists:

- Good State Rocky Grassland and Moist grassland (centre of site – ecological assessment)
- Unchannelled Valley Bottom Wetland (centre of site – wetland delineation report)
- Seepage area and area depicted difficult to excavate (northern extent of site and towards wetland - Geotechnical investigation)

The good state rocky grassland and moist grassland (primary vegetation), wetland (non-perennial river) in the centre of the site has been excluded from the development footprint from onset. These areas are also considered the most probable for red listed bird habitat and are being conserved (no-go area). The area depicted as difficult to excavate and where seepage may occur have been delineated and also excluded from the site layout plan. ***(Refer to Appendix A – Site Plan overlain with environmental sensitivities)***

Consideration of Site Plan Alternatives: In relation to existing infrastructure on site and it surroundings
The new cemetery will augment old cemetery and is logically being positioned in the site layout plan next to it. The new cemetery would be reliant on the parking facilities provided in the park erf in front of the old cemetery along the R509.

Further in terms of the waste transfer station; there is an existing warehouse building on the project site and it is the aim of MCLM to capitalise on the existing structures on the project site and incorporate it as part of the transfer station. The waste transfer station position was therefore reasonably placed to correspond to such and in favour of the road frontage and existing entrance.

No alternative site layout plans were considered. The current site plan is considered the optimal use of the project site with due consideration of the environmental features on site.

I&Aps inputs on site layout:
The Swallow's Inn guest house requested that the waste transfer station be moved to the back of the cemetery to lower the potential visual impact such a facility may have on the local residents and motorists.

Yet, the municipality feels that the waste transfer station will be enclosed with a 2.4m high wall to screen the facility operations and have undertaken to remove the waste at the transfer station on a daily basis. It will be placed next to the R509 for ease of access and to capitalise of the existing warehouse on the property. The site plan was therefore not changed by MCLM.

4. PHYSICAL SIZE OF THE ACTIVITY

Indicate the total physical size (footprint) of the proposal as well as alternatives. Footprints are to include all new infrastructure (roads, services etc), impermeable surfaces and landscaped areas:

	Size of the activity:
Proposed activity **Cemetery**	6.4ha
Waste Transfer Station	1.9ha
~~**Alternatives:**~~	
~~Alternative 1 (if any)~~	
~~Alternative 2 (if any)~~	
	~~Ha/ m^2~~

or, for linear activities:

	Length of the activity:
Proposed activity **Cemetery Phase A internal roads**	895m
Cemetery Phase B internal roads	1,102m
Waste Transfer internal roads	560m
~~**Alternatives:**~~	
~~Alternative 1 (if any)~~	
~~Alternative 2 (if any)~~	
	~~m/km~~

Indicate the size of the site(s) or servitudes (within which the above footprints will occur):

	Size of the site/servitude:
Proposed extent of both activities	**8.3ha**
~~**Alternatives:**~~	
~~Alternative 1 (if any)~~	
~~Alternative 2 (if any)~~	
	Ha/m^2

5. SITE ACCESS

Proposal

	YES	~~NO~~
Does ready access to the site exist, or is access directly from an existing road?		
If NO, what is the distance over which a new access road will be built		m
Describe the type of access road planned:		

There is an existing access to the study site off the R509 Koster-Magaliesburg Road. This existing access is 9.5m wide. The existing entrance to the property will be beautified and upgraded to accommodate traffic flow towards both the cemetery and waste transfer station. Access control to both facilities is proposed. (See **Appendix A: Site Plan** and **Appendix C-Facility Illustration for Waste Transfer Station**)

Waste Transfer Station: 560m of internal tar road by 5.5m wide will be constructed within the waste transfer station facility.

Based on Mogale City Local Municipality's count of private vehicles visiting the existing Magaliesburg (Ga-Mohale) Landfill site; only 20 private vehicles are anticipated to frequent the waste transfer station on a daily basis. There will only be x2 Two ton trucks (not considered heavy vehicles). The only heavy vehicle to frequent the site would be 1 municipal compactor truck (typically found in cities picking up waste from residential units). A bin removal vehicle will make a minimum of 3 trips per day to remove waste from the transfer station to the regional landfill site. Based on this survey the anticipated increase in traffic on the R509 and at the proposed waste transfer station is anticipated to be moderate to low.

Cemetery: The cemetery will be developed/established in phases. Phase A will require a proposed tar road network of 895m and Phase B a proposed tar road network of 1,102m.

Based on Mogale City Local Municipality previous experience, the traffic increase would predominantly be limited to weekends with anticipated 30 private vehicles per week. Bringing a total of 26 vehicles per day entering the facilities from the R509.

Cemetery Parking: The parking space in front of the old cemetery will be used and has sufficient space to service the new proposed cemetery.

Include the position of the access road on the site plan (if the access road is to traverse a sensitive feature the impact thereof must be included in the assessment).

~~**Alternative 1**~~

~~Does ready access to the site exist, or is access directly from an existing road?~~	~~YES~~	~~NO~~
~~If NO, what is the distance over which a new access road will be built~~		~~m~~

~~Describe the type of access road planned:~~

~~Include the position of the access road on the site plan. (if the access road is to traverse a sensitive feature the impact thereof must be included in the assessment).~~

~~**Alternative 2**~~

~~Does ready access to the site exist, or is access directly from an existing road?~~	~~YES~~	~~NO~~
~~If NO, what is the distance over which a new access road will be built~~		~~m~~

~~Describe the type of access road planned:~~

~~Include the position of the access road on the site plan. (if the access road is to traverse a sensitive feature the impact thereof must be included in the assessment).~~

PLEASE NOTE: Points 6 to 8 of Section A must be duplicated where relevant for alternatives

Section A 6-8 has been duplicated **0** Number of times

(only complete when applicable)

6. LAYOUT OR ROUTE PLAN

A detailed site or route (for linear activities) plan(s) must be prepared for each alternative site or alternative activity. It must be attached to this document. The site or route plans must indicate the following:

- the layout plan is printed in colour and is overlaid with a sensitivity map (if applicable);
- layout plan is of acceptable paper size and scale, e.g.
  - A4 size for activities with development footprint of 10sqm to 5 hectares;
  - A3 size for activities with development footprint of > 5 hectares to 20 hectares;
  - A2 size for activities with development footprint of >20 hectares to 50 hectares);
  - A1 size for activities with development footprint of >50 hectares);

- The following should serve as a guide for scale issues on the layout plan:
  - A0 = 1: 500
  - A1 = 1: 1000
  - A2 = 1: 2000
  - A3 = 1: 4000
  - A4 = 1: 8000 (±10 000)
- shapefiles of the activity must be included in the electronic submission on the CD's;
- the property boundaries and Surveyor General numbers of all the properties within 50m of the site;
- the exact position of each element of the activity as well as any other structures on the site;
- the position of services, including electricity supply cables (indicate above or underground), water supply pipelines, boreholes, sewage pipelines, septic tanks, storm water infrastructure;
- servitudes indicating the purpose of the servitude;
- sensitive environmental elements on and within 100m of the site or sites (including the relevant buffers as prescribed by the competent authority) including (but not limited thereto):
  - Rivers and wetlands;
  - the 1:100 and 1:50 year flood line;
  - ridges;
  - cultural and historical features;
  - areas with indigenous vegetation (even if it is degraded or infested with alien species);
- Where a watercourse is located on the site at least one cross section of the water course must be included (to allow the position of the relevant buffer from the bank to be clearly indicated)

FOR LOCALITY MAP (NOTE THIS IS ALSO INCLUDED IN THE APPLICATION FORM REQUIREMENTS)

- the scale of locality map must be at least 1:50 000. For linear activities of more than 25 kilometres, a smaller scale e.g. 1:250 000 can be used. The scale must be indicated on the map;
- the locality map and all other maps must be in colour;
- locality map must show property boundaries and numbers within 100m of the site, and for poultry and/or piggery, locality map must show properties within 500m and prevailing or predominant wind direction;
- for gentle slopes the 1m contour intervals must be indicated on the map and whenever the slope of the site exceeds 1:10, the 500mm contours must be indicated on the map;
- areas with indigenous vegetation (even if it is degraded or infested with alien species);
- locality map must show exact position of development site or sites;
- locality map showing and identifying (if possible) public and access roads; and
- the current land use as well as the land use zoning of each of the properties adjoining the site or sites.

7. SITE PHOTOGRAPHS

Colour photographs from the center of the site must be taken in at least the eight major compass directions with a description of each photograph. Photographs must be attached under the appropriate Appendix**.** It should be supplemented with additional photographs of relevant features on the site, where applicable.

8. FACILITY ILLUSTRATION

A detailed illustration of the activity must be provided at a scale of 1:200 for activities that include structures. The illustrations must be to scale and must represent a realistic image of the planned activity. The illustration must give a representative view of the activity to be attached in the appropriate Appendix.

SECTION B: DESCRIPTION OF RECEIVING ENVIRONMENT

Note: Complete Section B for the proposal and alternative(s) (if necessary)

Instructions for completion of Section B for linear activities

1) For linear activities (pipelines etc) it may be necessary to complete Section B for each section of the site that has a significantly different environment.
2) Indicate on a plan(s) the different environments identified

3) Complete Section B for each of the above areas identified
4) Attach to this form in a chronological order
5) Each copy of Section B must clearly indicate the corresponding sections of the route at the top of the next page.

Section B has been duplicated for sections of the route **"insert No. of duplicates"** times

Instructions for completion of Section B for location/route alternatives

1) For each location/route alternative identified the entire Section B needs to be completed
2) Each alterative location/route needs to be clearly indicated at the top of the next page
3) Attach the above documents in a chronological order

Section B has been duplicated for location/route alternatives **0** times (complete only when appropriate)

Instructions for completion of Section B when both location/route alternatives and linear activities are applicable for the application

Section B is to be completed and attachments order in the following way

- All significantly different environments identified for Alternative 1 is to be completed and attached in a chronological order; then
- All significantly different environments identified for Alternative 2 is to be completed and attached chronological order, etc.

Section B - Section of Route ☐ (complete only when appropriate for above)

Section B – Location/route Alternative No. ☐ (complete only when appropriate for above)

1. PROPERTY DESCRIPTION

Property description: (Including Physical Address and Farm name, portion etc.)

Portion 22 of the farm Rietpoort 395JQ,
R509 Koster/Magaliesburg Road
Magaliesburg District

2. ACTIVITY POSITION

Indicate the position of the activity using the latitude and longitude of the centre point of the site for each alternative site. The co-ordinates should be in decimal degrees. The degrees should have at least six decimals to ensure adequate accuracy. The projection that must be used in all cases is the WGS84 spheroid in a national or local projection.

Alternative:	**Latitude (S):**	**Longitude (E):**
Waste Transfer Station	-26.001329°	27.459121°
Cemetery	-25.999460°	27.459388°

~~**In the case of linear activities:**~~

~~**Alternative:**~~	~~**Latitude (S):**~~	~~**Longitude (E):**~~
~~• Starting point of the activity~~	~~°~~	~~°~~
~~• Middle point of the activity~~	~~°~~	~~°~~
~~• End point of the activity~~	~~°~~	~~°~~

~~For route alternatives that are longer than 500m, please provide co-ordinates taken every 250 meters along the route and attached in the appropriate Appendix~~

Addendum of route alternatives attached ☐

The 21 digit Surveyor General code of each cadastral land parcel

PROPOSAL	T	0	J	Q	0	0	0	0	0	0	0	0	0	3	9	5	0	0	0	2	2
~~**ALT. 1**~~																					
~~**ALT. 2**~~																					
~~**etc.**~~																					

3. GRADIENT OF THE SITE

Indicate the general gradient of the site.

Flat	**1:50 – 1:20**	1:20 – 1:15	1:15 – 1:10	1:10 – 1:7,5	1:7,5 – 1:5	Steeper than 1:5

Note:

Average slope of the site is 1.7%; -0.4%. It is flat in its southern portion and slopes to the north east towards the center of the site to a wetland.

Figure 4: Slope of site

The waste transfer station position is flat.
The cemetery will comprise a larger area which presents the site slope to north easterly direction towards the center of study site. (1: 22 slope)

4. LOCATION IN LANDSCAPE

Indicate the landform(s) that best describes the site.

Ridgeline	Plateau	Side slope of hill/ridge	Valley	Plain	**Undulating plain/low hills**	River front

5. GROUNDWATER, SOIL AND GEOLOGICAL STABILITY OF THE SITE

a) Is the site located on any of the following?

Shallow water table (less than 1.5m deep) **(Refer to notes below [1])**	**YES**	~~NO~~
Dolomite, sinkhole or doline areas	~~YES~~	**NO**
Seasonally wet soils (often close to water bodies) **(Refer to notes below [2])**	**YES**	~~NO~~
Unstable rocky slopes or steep slopes with loose soil **(Refer to note [5])**	~~YES~~	**NO**
Dispersive soils (soils that dissolve in water)	~~YES~~	**NO**
Soils with high clay content (clay fraction more than 40%) **(Refer to notes below [3])**	~~YES~~	**NO**
Any other unstable soil or geological feature	~~YES~~	**NO**
An area sensitive to erosion **(Refer to notes below [4])**	**YES**	~~NO~~

(Information in respect of the above will often be available at the planning sections of local authorities. Where it exists, the 1:50 000 scale Regional Geotechnical Maps prepared by Geological Survey may also be used).

Note:
A Geotechnical Investigation Report was prepared for the study site. Refer to Appendix G (G1) for specialist reports. In a nutshell the findings represent the following:

- [1] Seasonal seepage water of less than 0.40 m below ground level will be a reality throughout the majority of the site. The site may be affected by seasonal flooding. A Floodline determination is essential. Localised areas of surface ponding conditions can be expected. – (This pertains to the wetland and seepage area being excluded from the layout plan)
- Saturated soil conditions and a seasonal perched groundwater table or seepage water conditions may however be present, especially during and after heavy and/or continuous downpours; (This is referred to as the seepage area in the report-it is excluded from the site layout plan)

- [2] There is a wetland in centre of the study site.
- [3] Clay content identified within soil compositions for the site were all below 40%
- [4] The site has a medium to high heave (swell) potential and soils have a medium susceptibility to erosion
- [5] There are no steep slopes or unstable slopes. Trenches were stable, did not show signs of sidewall buldging. Side wall instability is however a high probability and risk due to high amount of fines present in soil and signs of shallow water seepage conditions.

Additional notes adding to the geotechnical investigation

- The northern portion of the site poses an excavation difficulty down to around 1.80 m to 2.40 m with TLB excavation in a confined trench;
- Soft excavation conditions where encountered in the remainder of the site from the drainage feature towards the south boundary of the site.

The cemetery and waste transfer station will be developed in the southern extent of the study site. The wetland will be conserved with the implementation of a 32m buffer zone and will be placed above the 1:100 year floodline. The areas that are affected by a seepage area, wetland and area that have been depicted as difficult for excavations will not be developed. It will remain vacant and undeveloped.

b) are any caves located on the site(s)	YES	**NO**

~~If yes to above provide location details in terms of latitude and longitude and indicate location on site or route map(s)~~

~~**Latitude (S):**~~	~~**Longitude (E):**~~
°	°

c) are any caves located within a 300m radius of the site(s)	YES	**NO**

~~If yes to above provide location details in terms of latitude and longitude and indicate location on site or route map(s)~~

~~**Latitude (S):**~~	~~**Longitude (E):**~~
°	°

d) are any sinkholes located within a 300m radius of the site(s)	YES	**NO**

~~If yes to above provide location details in terms of latitude and longitude and indicate location on site or route map(s)~~

~~**Latitude (S):**~~	~~**Longitude (E):**~~
°	°

~~If any of the answers to the above are "YES" or "unsure", specialist input may be requested by the Department~~

6. AGRICULTURE

Does the site have high potential agriculture as contemplated in the Gauteng Agricultural Potential Atlas (GAPA 4)? **Please note**: The Department may request specialist input/studies in respect of the above.	**YES**	NO

Notes:

According to the Gauteng Agricultural Potential Atlas (2002) the study site does fall within a moderate to high potential agricultural area which is of agricultural importance for protection.

1. **The development site is not cultivated. There are signs of historic cultivation, but it has not been cultivated for the past 11 years. Currently the land parcel lies fallow and is being used as cattle grazing by surrounding land owners. The site consists mostly of pioneer grasses with low nutritional value;**

   According to AGIS online agricultural data system (AGIS Comprehensive Atlas) of the National Department of Agriculture and Agricultural Research Council the site falls within an area with high land capability in terms of agricultural potential– high potential arable land.

2. In terms of the Mogale City Local Municipality Spatial Development Framework 2011 GDARD has set out a number of agricultural hubs in the province. The south-western part of Mogale City, roughly to the south and west of the R24 Rustenburg Road forms part of one such hub. The site roughly falls within this area.

The SDF reserves prime agricultural land in Mogale City and intends to protect it from any development or land uses that ***may have a negative impact on the agricultural potential of the area***. The SDF earmarks the area as "focused agricultural development".

3. The Magaliesburg Precinct Plan earmarks areas west of Magaliesburg as an "extensive agricultural and tourism zone" and the areas east of Magaliesburg is earmarked for "intensive agriculture and conservation zone". The study site, thus according to the precinct plan falls within an Agricultural Hub

The cemetery and waste transfer station is considered services infrastructure as supporting land uses for the rural area not aimed at influencing the agricultural potential for the area. This would be an insignificant loss of agricultural land. Only 8.3 hectares will be used for the developed. None of the 8.3 hectares is currently cultivated or was cultivated for the past 11 years. The pre-development land use is grazing/ fallow land.

7. GROUNDCOVER

To be noted that the location of all identified rare or endangered species or other elements should be accurately indicated on the site plan(s).

Indicate the types of groundcover present on the site and include the estimated percentage found on site

Natural veld - good condition % = 24 Rocky Grassland (good condition)	**Natural veld with scattered aliens % = 19** Moist grassland Rocky Grassland – between mowed and secondary grassland	Natural veld with heavy alien infestation % =	**Veld dominated by alien species % = 53%** Secondary grassland (7) Mowed, secondary grassland (1)	Landscaped (vegetation) % =
Sport field % =	Cultivated land % =	Paved surface (hard landscaping) % =	**Building or other structure % = 4** Transformed area	Bare soil % =

Please note: The Department may request specialist input/studies depending on the nature of the groundcover and potential impact(s) of the proposed activity/ies.

Are there any rare or endangered flora or fauna species (including red list species) present on the site	**YES**	NO

If YES, specify and explain:

A vegetation survey identified the following plants of conservation concern on the study site:

Plants of Conservation Concern confirmed to occur on site				
Species	**Common Name**	**Provincially protected**	**Declining species (Orange listed)**	**Habitat**
Gladiolus elliotii	Orchid – Sword Lilly	Yes	-	Secondary -, mowed Grassland Rocky Grassland
Hypoxis hemerocallidea	African Potato	-	Yes	Secondary-, mowed grassland Rocky grassland
Gladiolus crassifolius	Gladiola	Yes	-	Mowed grassland
Habenaria cf epipactideae	Wild orchid	Yes	-	Mowed grassland
Eucomis autumnalis	Pineapple plant	Yes	Yes	Rocky grassland Moist grassland
Boophone distichia	Poison bulb	-	Yes	Rocky grassland

Notes:

A. **TOPS**: No threatened or protected plant species (TOPS) were recorded on the site or are expected to occur.

B. **Red and Orange Listed Plant Species:** South African National Biodiversity Institute (SANBI) published the Red List of SA plants. GDARD provides a list of Red and Orange listed species within the Gauteng province. The list is referred to as Plants of Conservation Concern. Three (3) Declining species were confirmed to occur.
   - **Poison bulb:** 10 individuals were recorded;
   - **Pineapple plant:** 5 individuals were recorded;
   - **African Potato – Orange listed:** 6 individuals were recorded;

   The recordings have been georeferenced and are included in the **Ecological Impact Assessment** report compiled by Dimela Eco-Consulting attached to the CBAR under **Appendix G2** specialist reports. Also see Appendix A for site plans overlain with local sensitivities.

C. **Provincially Protected Plant Species:** These are plant species listed in the Transvaal Nature Conservation Ordinance Act 12 of 1983 and are provincially protected. Two (2) Gladiolus species (Sword Lilly and Gladiola), an orchid species (wild orchid) and the African Potato occur in the grasslands.

D. **Red Listed Bird Habitat:** The project site falls within an area specified as red listed bird habitat. It is anticipated that this habitat pertains to the moist grassland and good state rocky grassland in the central portion of the site and adjacent to the site. There is also an outcrop/koppie 200m east of the project site which could sustain red listed bird habitat. Yet the wetland delineation functional assessment indicates that a limited number of birds and animals were recorded in the wetland area /site with a low score as a potential migration, breeding or feeding site.

Are there any rare or endangered flora or fauna species (including red list species) present within a 200m (if within urban area as defined in the Regulations) or within 600m (if outside the urban area as defined in the Regulations) radius of the site.	**YES**	NO

If YES, specify and explain:

The study site is located east adjacent to an existing cemetery. North of the existing cemetery, good condition rocky grassland was recorded. The area was searched for threatened species and the declining *Boophone distichia (Poison Bulb)* *was observed in this rocky grassland.*

Are there any special or sensitive habitats or other natural features present on the site?	**YES**	NO

If YES, specify and explain:

The study site comprises 4 **vegetation units** of which two are important, nl. **Moist grassland and rocky grassland**. The moist grassland corresponds to a wetland area that was recorded in the middle of the site. The **wetland flows through the site** from west to east. A Vegetation Assessment Report was conducted to survey the flora on site and potential impacts. A Wetland Delineation and Functional Assessment were conducted to delineate the wetland area, classify the watercourse and determine its function within the larger system.

Refer to ***Appendix G2 Ecological Assessment Report*** (Dimela Eco Consulting).
Refer to ***Appendix G3 Wetland Delineation and Functional Assessment Report*** (Limosella Consulting).

A. Terrestrial Features

A1. Overall outcome of the vegetation survey:

Dimela Eco-Consulting conducted a survey in March 2015. The information contained in this box is based on the outcomes of the survey and assessment.

The site was historically cultivated. However not ploughed for at least the last 11 years. It is situated within savannah biome (Moot Plains Bushveld) but is representative of grassland. The Moot Plains Bushveld is considered a vulnerable vegetation type. Yet the site is dominated by a grass layer with limited indigenous trees on rocky areas along the non-perennial river and in proximity of the existing cemetery and was repetitive of grassland or open, wooded grassland. 4 vegetation units are present on site. Two (2) of the units are considered of importance (highlighted in yellow & red)

The broad vegetation groups/units represented on site and there importance as well as scale to the study site are tabled below. Refer to Table 1:

Table 1 – Vegetation units on site and their importance:

Vegetation unit	Percentage of site	Extent on site	State	Sensitivity	Protection status	Position on site
Transformed area (building and gravel road)	4%	1.02624 ha	Insignificant	Insignificant	Insignificant	Southern extend of site
Mowed Secondary grassland	10%	2.5656ha	Secondary	Low-Medium	None	Southern portion of site around workshop area
Secondary Grassland	43%	11.03208ha	Secondary	Low-Medium	None	Southern and northern extend of site
Rocky Grassland good state	36% (24%)	9.94 ha (6.157ha)	**sub-climax state**	Medium	Provincial Vulnerable Good state	Around wetland on site (center of site)
Rocky grassland (past disturbance)	(12%)	(3.078ha)	Sub-climax - secondary	Medium	Provincial Vulnerable- *not good state though*	Proximity to existing cemetery between mowed and secondary grassland
Moist Grassland	7%	1.79592ha	**sub-climax state**	Medium-High	National Water Act, 1998 *Watercourse*	Wetland in the center of the site around the dam
Total	100%	25.656 hectares		-		-

All the vegetation units in bold writing above are vulnerable. The rocky grassland comprised two orders on site (a) good condition rocky grassland and (b) rocky grassland with alien infestation and past disturbance. The rocky grassland with past disturbance is of sub-climax state albeit tends towards secondary status and can be considered for development. Details of the plant species contained within the vegetation units are contained in the vegetation assessment report.

As per the above table & matrix it is evident from a flora perspective that 3 vegetation units on site are developable and the transformed area. The area suitable for development of the cemetery and waste transfer station on the study site totals to 69% which is 17.702hectares. This dismisses the moist – and good state rocky grassland (31% of site).

The Mogale City Local Municipality has indicated that only 8.3 hectares of the site will be used for the development within the southern extent of the site. It leaves sufficient suitable area within the study site to accommodate the activities on areas of insignificant and low-medium sensitivity. As per the layout plan for the cemetery and waste transfer station attached as Appendix A, the development area excludes seepage areas, the drainage area.

The current site plan conforms to the recommendations of the ecological assessment. It excludes the good state rocky grassland, moist grassland. Only the transformed area, mowed secondary grassland, secondary grassland as well as past disturbance rocky grassland would be used for the development as suggested in the ecological assessment report by Dimela.

A2. Important flora habitats
Recalling the Plants of Conservation Concern which occur on site. These plants are associated with specific habitats. These habitats correspond to the southern extent of the study site (south of the wetland). The important habitats on site include:

- Habenaria (orchid) habitat, (mowed secondary grassland)
- Gladiolus ellioti habitat (secondary grassland and rocky grassland around wetland)
- Gladiolus crassifolius habitat (mowed secondary grassland)

Refer to figure 7 in the Vegetation Assessment Report under Appendix G2 for a vegetation sensitivity map which sets out these habitats within the study site and its relation to low and medium sensitivity areas. (Also refer to Appendix A – Site plans to the BAR).

A3. Gauteng Conservation Plan conservation target areas:
The cemetery and waste transfer station will not impact on areas classified by the Gauteng Conservation Plan. The site does however include localized sensitivities nl. Declining plant species and grassland vegetation. The impact from development would be removal of vegetation and destruction of plants of conservation concern (if relocation is not possible).

A4. Surrounding vegetation
The vegetation surrounding the site comprised mainly of secondary grassland, while the moist grassland on site stretched further eastward. A rocky outcrop was situated about 300m east of the mid-portion of the site. The site is separated from the rocky outcrop by a fallow land.

B. AQUATIC ECOSYSTEM

B1. Overall outcome of Wetland Delineation & Functional Assessment
Limosella Consulting investigated the site during March 2015. The information contained below is based on the outcomes of the assessment.

The study site is within Water Management Area 3 – Crocodile West and Groot Marico in quaternary Catchment A21F. There is a drainage line running through the site from west to east (flowing east) where it joins another river. It is considered to be primarily a wetland and a temporary river (episodic); the temporary river only having flow response to extreme rainfall events due to its high elevation.

Wetlands are identified based on characteristics and attributes which include:

The wetland on site is a unchannelled valley bottom wetland. It has two legs that enter the study site. The two legs are in the middle and northern extent of the site. It is only located on a small section of the study site and flows from west to east into the larger wetland system.

Wetland 1 – Unchannelled Valley Bottom Wetland (North)
This leg of the wetland largely lacked wetland vegetation and soil features, but did indicate a wetness gradient per aerial imagery. This could not be verified on site. The wetland is adjacent to a dirt road & fence where vegetation is kept short. Current & historical agricultural practices were recorded here. This wetland section no longer functions as a wetland and is dried out. (To be confirmed by hydrological study).

Wetland 2 – Unchannelled Valley Bottom Wetland (South)
The wetland lacked a permanent zone, except where a dam was formerly constructed. It lacked essential wetland vegetation except for Bulrush reeds, in the dam. Facultative wetland vegetation dominated the remainder of the wetland. A large number of exotic vegetation is present due to former farming activities. The soil profile lacked visible moisture gradient even after recent (March) rains. Water is possibly retained by agricultural activities and the dam. The soil is dry dark clay soils with small mottling. A large number of "Asterjies/Boesmanrietjie" flowers (*Berkheya radula*) were recorded in the clay soils surrounding and in the wetland.

The function of this wetland is flood attenuation, stream flow reduction and water quality enhancement. The presence of the dam in the wetland will contribute to flood regulation while it also decreases stream flow regulation. The lack of robust vegetation has decreased the water quality enhancement function.

The site was significantly disturbed by farming. It does not have a channel and the valley floor is a depositional environment composed of fluvial or colluvium deposit sediment. The system tends to be found in upper catchment areas where sediment from the tributary smothers the main drainage line.

B2. Present ecological status: The ecological status of the wetland is D – which is largely modified. A large change in ecosystem processes and loss of natural habitat and biota has occurred.

B3. Environmental Importance and Sensitivity: It is considered of moderate sensitivity and importance. It is important and sensitive on a provincial /local scale. The biodiversity of the wetland is not sensitive to flow or habitat modification. It plays a small role in moderating the quantity and quality of water in major rivers.

B4. Buffer zone: A 32m buffer zone should be recognized from the edge of the wetland.

B5. PROTECTION BY NATIONAL LEGISLATION
Wetlands within 500m of development are regarded as sensitive as per Regulation 1199/2009 of the NWA, 1998. The cemetery fits this criterion. A Water Use License Application is required for a Section 21 (c) and (i) water use in terms of the NWA, 1998.

The development layout will adhere to the 32m buffer zone and will be set above the 1: 100 year floodline. Soils on site were found to be slightly permeable. The risk of pollution from the cemetery is through to be low. Cemeteries are currently considered as having low to negligible-risk to the environment.

The current layout plan for the facilities will exclude a seepage area (recognized in the Geotechnical Investation), the drainage area (as delineated by Limosella).

C. IMPORTANT BIRD HABITAT

According to GDARD GIS the site corresponds to red listed bird habitat: The red listed bird habitat may pertain to the good state rocky grassland and moist grassland in the centre of the study site. This area is being conserved in the site layout plan. It must be highlighted that this habitat also extends further east wards of the site. The cemetery and waste transfer station would be located on transformed, mowed secondary grassland, secondary grassland and past disturbance rocky grassland. The past disturbance rocky grassland was considered feasible for development by the ecologist.

ECOLOGICAL SPECIALIST DETAILS

Was a specialist consulted to assist with completing this section		**YES**	~~NO~~
If yes complete specialist details			
Name of the specialist:	Dimela Eco-Consulting - Ms. Antoinette Eyssell		
Qualification(s) of the specialist:	M. Sc Environmental Science; B.Sc (Hons) Horticulture; B.Sc (Agriculture) Horticulture SACNASP Reg. No. 400019/11 Pr Sci Nat (400019/11) Ecological Science.		
Postal address:	389 Rossouw Street, Die Wilgers, Pretoria		
Postal code:	0184		
Telephone:		Cell:	083 6426 295
E-mail:	Antoinette@dimela-eco.co.za DimelaEcoConsulting@gmail.com	Fax:	
Are any further specialist studies recommended by the specialist?		YES	**NO**

Signature of specialist: _____ Date: 2015 -10-26

Please note; If more than one specialist was consulted to assist with the filling in of this section then this table must be appropriately duplicated

WETLAND SPECIALIST DETAILS

Was a specialist consulted to assist with completing this section		**YES**	~~NO~~
If yes complete specialist details			
Name of the specialist:	Limosella Consulting Pty Ltd – Ms Antoinette Bootsma		
Qualification(s) of the specialist:	SACNASP Reg. No. 400222-09 (Ecologist/ Wetland specialist/Botanist)		
Postal address:			
Postal code:			
Telephone:		Cell:	083 4545 454
E-mail:	Antoinette@limosella.co.za	Fax:	
Are any further specialist studies recommended by the specialist?		YES	**NO**
~~If YES, specify:~~	The delineation of the 1:100 year floodline would be required as part of the Water Use License Application which is an engineering function, not covered by the Wetland Delineation Report.		
~~If YES, is such a report(s) attached?~~		~~YES~~	~~NO~~
~~If YES list the specialist reports attached below~~			

Signature of specialist: _____ Date: 2015 -10-26

8. LAND USE CHARACTER OF SURROUNDING AREA

Using the associated number of the relevant current land use or prominent feature from the table below, fill in the position of these land-uses in the vacant blocks below which represent a 500m radius around the site

1. Vacant land	**2. River, stream, wetland**	3. Nature conservation area	4. Public open space	**5. Koppie or ridge**
6. Dam or reservoir	**7. Agriculture**	8. Low density residential	9. Medium to high density residential	10. Informal residential
11. Old age home	12. Retail	13. Offices	14. Commercial & warehousing	**15. Light industrial**
16. Heavy industrial[AN]	**17. Hospitality facility**	18. Church	19. Education facilities	20. Sport facilities
21. Golf course/polo fields	22. Airport[N]	23. Train station or shunting yard[N]	**24. Railway line[N]**	25. Major road (4 lanes or more)[N]
26. Sewage treatment plant[A]	27. Landfill or waste treatment site[A]	28. Historical building	**29. Graveyard**	30. Archeological site
31. Open cast mine	32. Underground mine	33.Spoil heap or slimes dam[A]	**34. Small Holdings**	
Other land uses (describe):	The site borders the R 509 Magaliesburg / Koster Road in its southern extent. An Eskom power line is located some 500m west of the site.			

NOTE: Each block represents an area of 250m X 250m, if your proposed development is larger than this please use the appropriate number and orientation of hashed blocks

NORTH

7	7	7	7	7; 1
7	7	7; 1	7; 1	1
7	5;1 29	15	2;6; 5; 15	34; 1
24; 34	24; 17	24; 7; 34	24; 34	24; 34
7	34; 7	34; 7	34	34

WEST

EAST

SOUTH

STUDY SITE

Note: More than one (1) Land-use may be indicated in a block

Please note: The Department may request specialist input/studies depending on the nature of the land use character of the area and potential impact(s) of the proposed activity/ies. Specialist reports that look at health & air quality and noise impacts may be required for any feature above and in particular those features marked with an "A" and with an "N" respectively.

Have specialist reports been attached	YES	**NO**

~~If yes indicate the type of reports below~~

"24. Railway Line N is south alongside the R509 Koster-Magaliesburg Road. This is south of the study site. The railway line will not have an impact on the waste transfer station or cemetery and vice versa.

"17. Hospitality facility" is 250m south west of the study site. This is a guest house, wedding and conference facility known as Swallow's Inn. The proposed cemetery will not impact on the hospitality facility and vice versa.

During the public participation process the owners of the guest house and other small holding owners indicated that the waste transfer station will impact on the future economic viability of the guest house due to nuisance impacts anticipated from the WTS (noise, odour, visual impact, increased traffic in the immediate area and impact on local aesthetic value).

The design of the WTS, screening measures and well managed operations by the facility operators can address/ significantly mitigate potential negative impacts. (noise, odour, visual impact). Its initial scale and volumes of wastes to be received are low at 60m^3 per day.

"15. Light Industrial" is directly east adjacent to the study site. This refers to an edible oil factory, Amanah Oil CC, with associated staff accommodation (houses). As per the geohydrological assessment conducted for the study site, the cemetery will have a low to negligible impact on groundwater. The soils on site are only slightly permeable thus would have a low to negligible risk for pollution. Potential impacts associated with a waste transfer station such as rodents&birds, odour, litter and air emissions can be managed. The WTS will be fully enclosed. With good housekeeping and facility management these impacts can be addressed. If managed correctly the WTS should not impact on the factory.

In the south eastern corner of the study site there is a light industrial land use. This refers to an automotive repair workshop/building. This business owner leases the premises from the local authority. The tenant has already received notice from the local municipality of their intent to develop the property and the termination of its lease agreement. The business would need to move to a different premise.

R509 Koster-Magaliesburg Road
The cemetery and waste transfer station may generate additional traffic volumes in the immediate area along the R509. The existing entrance to the study site will be upgraded. Mitigation measures will be provided and design measures to manage such impacts in the EMPr and this Basic Assessment Report.

Eskom power line
The eskom power line does not affect the development layout of the cemetery or waste transfer station and vice versa.

9. SOCIO-ECONOMIC CONTEXT

Describe the existing social and economic characteristics of the area and the community condition as baseline information to assess the potential social, economic and community impacts.

The local area is a rural environment and is sparsely populated. It is made up of agricultural activities (crop & cattle grazing), small holdings and wide spread tourism facilities. East of the study site is a light industrial facility, edible oil factory and personnel residential units, Amanah Oil CC. West of the site is the existing Magaliesburg cemetery. There is an auto workshop on the development property. The R509 Road forms the southern boundary of the study site and is the local mobility route between Koster and Magaliesburg.

The broader study area is characterized by agricultural activities, interspersed by tourist accommodation facilities / conference facilities. Retail and support services are concentrated in the town of Magaliesburg. The study area however is more agricultural and rural in nature, so it can be assumed that agriculture is the main activity and tourism related services are more prominent. The regional area has a 33% employment rate and 77% unemployment rate.

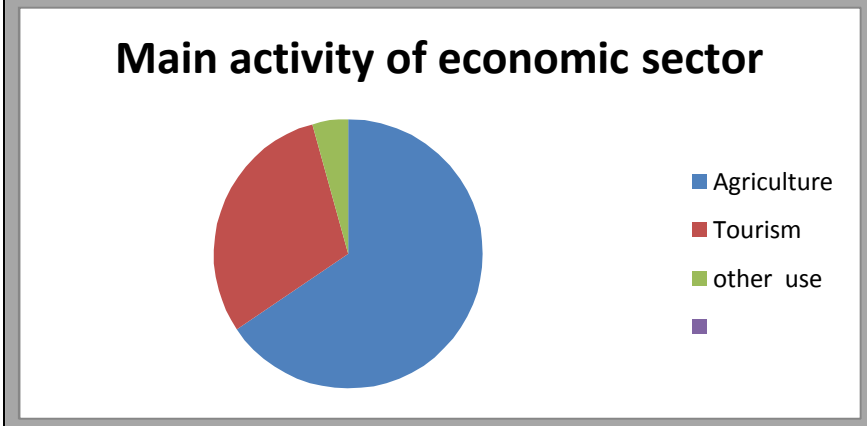

Figure 5: Economic Activity chart of study area

It has been indicated that Magaliesburg and its surrounding areas are losing its appeal as a regional attraction due to negligent development. Referring to the tourism facilities; there is a guest house/ wedding & conference facility some 250m south west of the study site. During the public participation process the proprietor of the facility indicated the waste transfer station will impact on the economic viability of the guest house due to anticipated impact of the WTS on the aesthetic value of the area and potential nuisance impacts from the facility.

The waste transfer station is believed to benefit the local community. Waste Transfer Stations in rural areas are considered “Convenience Centres” allowing residences to drop off their wastes in containers. Currently landowners are discarding their waste at Ga-Mohale landfill site. This landfill site is going to be closed. Once the landfill site is closed there will be no waste facility in the local area. MCLM is establishing the proposed waste transfer facility for the benefit of the local community. MCLM will remove waste on a regular basis from this facility to Luiperdsvlei Landfill site.

Waste transfer stations make solid waste collection more efficient and reduce overall transportation costs, air emissions, energy use, truck traffic, and road wear and tear. This saves the local community money and lowers the cost of solid waste management services.

By consolidating solid waste collection and disposal points, the transfer station will help the community to reduce the cost of hauling waste to the regional landfill site. Undesirable nuisance impacts from the proposed WTS can be addressed and managed through proper facility design and “Good Housekeeping” measures. The cemetery is considered a supporting land use which is required in the area. It will augment the existing cemetery and should not impact on the social and economic activities of the area.

.

10. CULTURAL/HISTORICAL FEATURES

Please be advised that if section 38 of the National Heritage Resources Act 25 of 1999 is applicable to your proposal or alternatives, then you are requested to furnish this Department with written comment from the South African Heritage Resource Agency (SAHRA) – Attach comment in appropriate annexure

38. (1) Subject to the provisions of subsections (7), (8) and (9), any person who intends to undertake a development categorised as-

(a) the construction of a road, wall, powerline, pipeline, canal or other similar form of linear development or barrier exceeding 300m in length;

(b) the construction of a bridge or similar structure exceeding 50m in length;

(c) any development or other activity which will change the character of a site-

(i) exceeding 5 000 m2 in extent; or

(ii) involving three or more existing erven or subdivisions thereof; or

(iii) involving three or more erven or divisions thereof which have been consolidated within the past five years; or

(iv) the costs of which will exceed a sum set in terms of regulations by SAHRA or a provincial heritage resources authority;

(d) the re-zoning of a site exceeding 10 000 m2 in extent; or

(e) any other category of development provided for in regulations by SAHRA or a provincial heritage resources authority, must at the very earliest stages of initiating such a development, notify the responsible heritage resources authority and furnish it with details regarding the location, nature and extent of the proposed development.

Are there any signs of culturally (aesthetic, social, spiritual, environmental) or historically significant elements, as defined in section 2 of the National Heritage Resources Act, 1999, (Act No. 25 of 1999), including archaeological or palaeontological sites, on or close (within 20m) to the site? If YES, explain:	~~YES~~	**NO**

If uncertain, the Department may request that specialist input be provided to establish whether there is such a feature(s) present on or close to the site.

Briefly explain the findings of the specialist if one was already appointed:

A Phase 1 Archaeological Impact Assessment was conducted the proposed establishment of Magalies cemetery and associated infrastructure by Naledzi Environmental Consultants CC during March 2015. Refer to ***Appendix G4 for the Heritage Impact Assessment Report***. The findings of the report were as follows:

The assessment/survey revealed relatively recent past remains which qualifies as remains of the 20th century. These remains are not necessarily older than sixty years and therefore may not qualify as archaeological or historical remains.

No further studies / Mitigations are recommended given the fact that within the proposed development footprint and its surrounding there is no archaeological or place of historical significance that will be impacted by the proposed cemetery development. However, should any chance archaeological or any other physical cultural resources be discovered subsurface, heritage authorities should be informed. From an archaeological and cultural heritage resources perspective, there are no objections to the proposed Magalies cemetery and associated infrastructures project and we recommend to the Provincial Heritage Resource Agency, South African Heritage Resource Agency to approve the project as planned.

Will any building or structure older than 60 years be affected in any way?	~~YES~~	**NO**
Is it necessary to apply for a permit in terms of the National Heritage Resources Act, 1999 (Act 25 of 1999)? If yes, please attached the comments from SAHRA in the appropriate Appendix	~~YES~~	**NO**

SECTION C: PUBLIC PARTICIPATION (SECTION 41)

1. The Environmental Assessment Practitioner must conduct public participation process in accordance with the requirement of the EIA Regulations, 2014.

2. LOCAL AUTHORITY PARTICIPATION

Local authorities are key interested and affected parties in each application and no decision on any application will be made before the relevant local authority is provided with the opportunity to give input. The planning and the environmental sections of the local authority must be informed of the application at least thirty (30) calendar days before the submission of the application to the competent authority.

Was the draft report submitted to the local authority for comment?	**YES**	NO
If yes, has any comments been received from the local authority?	**YES**	NO

If "YES", briefly describe the comment below (also attach any correspondence to and from the local authority to this application):

The local authority is the applicant for the proposed activities. They have been actively involved in the project planning, environmental process and design of the site layout plan. Comments, issues and concerns raised during the public participation process were submitted to local authority for inputs. Responses provided are attached and included in the Issues and Response Report. MCLM was also available at the project public meeting on 12 September 2015 to provide project clarity to I&Aps. Such have been included in the Minutes of the public meeting.

The Ward councillor of the Magalies Area (Ward 31); Mosese Dipuo was notified telephonically of the proposal and received an email including documents like the Background Information Document and the Draft Basic Assessment Report was made available to the Ward Councillor for review. She was also invited to the public meeting of 12 September 2015.

The public meeting for the project was also attended by ward committee members of Ward 31, Councilor Eddy Sloan of Ward 32. Their inputs are recorded in the IRR and Minutes of the Meeting.

If "NO" briefly explain why no comments have been received or why the report was not submitted if that is the case.

3. CONSULTATION WITH OTHER STAKEHOLDERS

Any stakeholder that has a direct interest in the activity, site or property, such as servitude holders and service providers, should be informed of the application at least **thirty (30) calendar days** before the submission of the application and be provided with the opportunity to comment.

Has any comment been received from stakeholders?	**YES**	NO

If "YES", briefly describe the feedback below (also attach copies of any correspondence to and from the stakeholders to this application):

A Background Information Document was made available to stakeholders during the public registration period from 24 June 2015 – 14 July 2015 via email, knock and drop. The Basic Assessment Report was made available for public review and submitted to stakeholders for comment from 26 August to 24/25 September 2015. The following inputs were received:

Department of Water and Sanitation - Comments from Ms. Lillian Siwelane – DWS on 30 September 2015

The proposed development will be within 500m from the delineated unchannelled valley bottom wetland. This activity triggers a Section 21 (c), (i) and (g) water use and a license in terms of Section 40 of the National Water Act, 1998 must be applied for. Storm water management plans must be submitted to DWS for approval prior implementation.

Gauteng Department of Roads and Transport – 12 October 2015

The Gauteng Strategic Transportation Network namely, provincial road K228 (P47-1) is affected, as such, in terms of Gauteng Transport Infrastructure Act, 2001 when an application for a township establishment, change in land use consent use, is lodged with the relevant authority, the said application must be lodged with this Department for evaluation.

An application must be submitted to GDRT for a way-leave if any part of a proposed service falls within 95m of any of the departments existing or future roads or within 500m radius of any intersection on the said road or railway line.

Further comments received from I&APs are summarized below:

Issues and concerns raised w.r.t. the Cemetery:

- There is a risk for potential groundwater pollution;
- The cemetery and its infrastructure may pollute the wetland on site;
- Impact on local safety and security (vagrants and other criminal elements can use the cemetery as an area for cover and for illegal activity);
- Unmanaged undeveloped land on the study site will result in a safety and security issue;
- Property devaluation will take place due to unmanaged vacant land outside of the proposed cemetery footprint;
- The cemetery will result in an increase in traffic in the immediate area and may lead to congestion in the immediate area along the R509;
- The R509 is a busy and dangerous road additional access from the R509 and turning vehicles may pose a safety risk;

Issues and concerns raised w.r.t. Waste Transfer Station

- The facility and its operations could potentially cause groundwater and surface water pollution.
- Why the need to develop the waste transfer facility? Where would be waste come from to feed into the waste transfer facility? Landowners in the area drive their waste to the at Ga-Mohale landfill themselves;
- This facility will result in litter and windblown contamination. There is no guarantee that facility will be well managed (kept clean, litter free)
- What is the estimated increase in traffic from the facility?
- Development & operation of the transfer station will increase traffic in the immediate area and cause road degradation due to use by heavy trucks;
- What volumes of waste will be stored at the transfer station?
- The waste facility will attract squatter camps, vagrants and waste pickers and pose a safety and security risk;
- The waste facility will impact on surrounding land uses (tourism facilities-guest house);

- The waste at the transfer station will omit unpleasant odours and cause air pollution (dry dusty waste);
- A waste facility is unsightly and will have a negative visual impact on the local area, motorists and tourists; The loading and offloading of waste by heavy vehicles will generate high noise levels;
- The facility will result in litter/stray pieces of litter in and around the facility and also litter from windblown contamination.
- Pose a health risk due to attraction of pests and rodents;
- The waste facility may pose a potential health concern due to attraction of rodents and pests as well as potential pollution. The waste facility will be adjacent to an edible oil factory, Amanah Oil CC;
- The facility would be operated by the local municipality. Municipal strikes induce littering in local area. This is a tourist attraction area;
- An alternative locality must be considered for the facility. The WTS is too close to tourism facilities;
- Windblown contamination (plastic, paper etc) may pose a risk to cattle and result in livestock fatalities;
- How will windblown contamination/plastic, papers be contained to site?
- There will be a decline in property values with the development of the cemetery and waste transfer facility;
- Will impact on economic (tourist) activities in the area;

The full comments received during the public participation process have been recorded in an Issues and Response Report Version 2 and is attached as Appendix E Public Participation Process, E6 – Issues and Response Report.

~~If "NO" briefly explain why no comments have been received~~

a)

4. GENERAL PUBLIC PARTICIPATION REQUIREMENTS

The Environmental Assessment Practitioner must ensure that the public participation process is adequate and must determine whether a public meeting or any other additional measure is appropriate or not based on the particular nature of each case. Special attention should be given to the involvement of local community structures such as Ward Committees and ratepayers associations. Please note that public concerns that emerge at a later stage that should have been addressed may cause the competent authority to withdraw any authorisation it may have issued if it becomes apparent that the public participation process was flawed.

The EAP must record all comments and respond to each comment of the public / interested and affected party before the application report is submitted. The comments and responses must be captured in a Comments and Responses Report as prescribed in the regulations and be attached to this application.

5. APPENDICES FOR PUBLIC PARTICIPATION

All public participation information is to be attached in the appropriate Appendix. The information in this Appendix is to be ordered as detailed below

Appendix 1 – Proof of site notice

Appendix 2 – Written notices issued as required in terms of the regulations

Appendix 3 – Proof of newspaper advertisements

Appendix 4 –Communications to and from interested and affected parties

Appendix 5 – Minutes of any public and/or stakeholder meetings

Appendix 6 - Comments and Responses Report

Appendix 7 –Comments from I&APs on Basic Assessment (BA) Report

Appendix 8 –Comments from I&APs on amendments to the BA Report (not included)

Appendix 9 – Copy of the register of I&APs

SECTION D: RESOURCE USE AND PROCESS DETAILS

Note: Section D is to be completed for the proposal and alternative(s) (if necessary)

Instructions for completion of Section D for alternatives

1) For each alternative under investigation, where such alternatives will have different resource and process details (e.g. technology alternative), the entire Section D needs to be completed
4) Each alterative needs to be clearly indicated in the box below
5) Attach the above documents in a chronological order

Section D has been duplicated for alternatives (complete only when appropriate) | 0 | times

Section D Alternative No. | "insert alternative number" | (complete only when appropriate for above)

1. WASTE, EFFLUENT, AND EMISSION MANAGEMENT

Solid waste management

Will the activity produce solid construction waste during the construction/initiation phase? **YES** / NO

If yes, what estimated quantity will be produced per month? **10m³**

How will the construction solid waste be disposed of (describe)?

All construction related wastes will be disposed of at the existing Luiperdsvlei landfill site.

Most waste is expected to be packaging materials (shrink wrap, cardboard) and litter generated by the construction staff. Waste will be recycled as far as possible. Non-recyclable waste will be sorted into different types and disposed of at a suitably licensed waste disposal facility. Onsite there will be a skip in which waste will be stored before transportation to the landfill for disposal. Either the municipal trucks or a licensed wasted management company will be contracted to manage the waste during the construction period.

Where will the construction solid waste be disposed of (describe)?

All construction related wastes will be disposed of at the existing Luiperdsvlei landfill.

Will the activity produce solid waste during its operational phase**?** **YES** / NO

(Cemetery – YES) (Waste Transfer Station – NO)

If yes, what estimated quantity will be produced per month? **0.01m³**

How will the solid waste be disposed of (describe)?

Waste Transfer Station: The waste transfer facility will not generate waste. The site will receive wastes which will be temporarily stored on site before it is taken to the Luiperdsvlei Landfill site for final disposal. The waste transfer station will not receive and remove more than 60m³ of waste per day.

Cemetery:
The cemetery will generate a small quantity of waste. Waste will be recycled as far as possible. Non-recyclable waste will be sorted into different types and taken to the proposed Magalies Waste Transfer Facility for disposal and accordingly feed into the municipal waste stream.

Has the municipality or relevant service provider confirmed that sufficient air space exists for treating/disposing of the solid waste to be generated by this activity?	**YES**	NO

Where will the solid waste be disposed if it does not feed into a municipal waste stream (describe)?

The local authority is the applicant for the proposed activities. Solid waste will feed into the municipal waste stream. With the closure of the Ga-Mohale landfill site, the proposed Magalies waste transfer station will be a temporary storage facility for waste before waste is shipped to the Luiperdsvlei Landfill.

The proposed cemetery will take their solid waste to the proposed Magalies waste transfer station to feed into the municipal waste stream.

Note: If the solid waste (construction or operational phases) will not be disposed of in a registered landfill site or be taken up in a municipal waste stream, the applicant should consult with the competent authority to determine whether it is necessary to change to an application for scoping and EIA.

Can any part of the solid waste be classified as hazardous in terms of the relevant legislation? If yes, inform the competent authority and request a change to an application for scoping and EIA.	YES	**NO**

Is the activity that is being applied for a solid waste handling or treatment facility? If yes, the applicant should consult with the competent authority to determine whether it is necessary to change to an application for scoping and EIA.	YES	**NO**

Describe the measures, if any, that will be taken to ensure the optimal reuse or recycling of materials:

This project involves the application for a cemetery and waste transfer station/solid waste storage facility. Waste will not be sorted or separated at the waste transfer station; therefore no handling of waste will take place. Waste will also not be treated at the transfer station.

No bins are provided in the transfer station design for hazardous waste. Small volumes of domestic hazardous wastes such as batteries, fluorescent tubes, e-waste, used oils, etc. will not be received on site. The local community will be notified / informed of this. They would need to take their own initiate and remove household hazardous wastes from their waste bags.

However, mixed wastes placed in the waste skips will be taken to the Luiperdsvlei Landfill site where these wastes will be sorted and separated into the various waste streams.

Liquid effluent (other than domestic sewage)

Will the activity produce effluent, other than normal sewage, that will be disposed of in a municipal sewage system? **(Cemetery – NO) (Waste Transfer Station – YES)**	**YES**	NO
If yes, what estimated quantity will be produced per month?		**1m^3**
If yes, has the municipality confirmed that sufficient capacity exist for treating / disposing of the liquid effluent to be generated by this activity (ies)?	YES	**NO**

Will the activity produce any effluent that will be treated and/or disposed of on site?	Yes	**NO**
If yes, what estimated quantity will be produced per month?		m^3

If yes describe the nature of the effluent and how it will be disposed.

All stormwater and water from hosing down the tipping/ramp/bin area/ floor will flow to a grease trap which will be situated at the lowest point on site. Water from the grease trap will flow to the septic tank which will be located at the guard house/ablution house. The septic tank will be emptied by the municipal sewage service provider for disposal at the Municipal Sewage works.

All waste water from the grease trap will go to a septic tank system. No waste water will be reused on site.

Note that if effluent is to be treated or disposed on site the applicant should consult with the competent authority to determine whether it is necessary to change to an application for scoping and EIA

Will the activity produce effluent that will be treated and/or disposed of at another facility?	YES	**NO**

~~If yes, provide the particulars of the facility:~~

~~Facility name:~~			
~~Contact person:~~			
~~Postal address:~~			
~~Postal code:~~			
~~Telephone:~~		Cell:	
~~E-mail:~~		Fax:	

~~Describe the measures that will be taken to ensure the optimal reuse or recycling of waste water, if any:~~

Liquid effluent (domestic sewage)

Will the activity produce domestic effluent that will be disposed of in a municipal sewage system?	**YES**	NO
If yes, what estimated quantity will be produced per month?	**$3m^3$**	
If yes, has the municipality confirmed that sufficient capacity exist for treating / disposing of the domestic effluent to be generated by this activity(ies)?	**YES**	NO

Will the activity produce any effluent that will be treated and/or disposed of on site?	YES	**NO**

If yes describe how it will be treated and disposed off.

Emissions into the atmosphere

Will the activity release emissions into the atmosphere?	**YES**	~~NO~~
If yes, is it controlled by any legislation of any sphere of government?	~~YES~~	**NO**

If yes, the applicant should consult with the competent authority to determine whether it is necessary to change to an application for scoping and EIA.

If no, describe the emissions in terms of type and concentration:

Cemetery: Small quantities of exhaust emissions will be generated during the construction phase. Dust will be generated, however would be low as gradual removal of vegetation cover will take place for burial chambers. Only areas for roads, infrastructure and buildings in the cemetery design will be cleared during construction. There are currently no other sources of air pollution (dust) in the area.

Waste Transfer Station: Small quantities of exhaust emissions will be generated during the construction and operational phase by vehicles transporting the wastes. These emissions are low concentrations and not governed by any legislation. During the construction phase dust will be generated, and may cause a nuisance impact to the Amanah Oil CC factory staff community east of the site. The impact however will be of short duration during construction. The waste transfer station will be surfaced during operational phase (asphalt, paved). No dust is anticipated from the facility during operation.

The waste transfer station may omit odours / unpleasant smells. The transfer station ramp and concrete slabs were waste skips/bins will be stored can be roofed with corrugated iron roof. This will prevent rainwater from entering bins and provide shade resulting in less water and sunlight exposure which will prevent bad odour. Also waste will be cleared on a daily basis, as it is a temporary storage facility and not a dump site. Waste first in must be removed first. To the regional landfill site. Such impacts can be well managed to address nuisances and to eliminate odours. The municipality bin removal vehicles will remove 90% of daily incoming waste to the landfill site. Only 10% of incoming waste will be left overnight as the WTS.

2. WATER USE

Indicate the source(s) of water that will be used for the activity

municipal	Directly from water board	**Groundwater X**	river, stream, dam or lake	other	the activity will not use water

If water is to be extracted from groundwater, river, stream, dam, lake or any other natural feature, please indicate

the volume that will be extracted per month:	**Unknown** liters

If Yes, please attach proof of assurance of water supply, e.g. yield of borehole, in the appropriate Appendix

The Magalies rural area is dependent on groundwater, as the area is not serviced by the municipality. Water during the construction and operational phases would therefore be obtained from groundwater.

A Geohydrological Investigation was conducted for the study site by Naledzi WaterWorks for the cemetery and waste transfer station. It is attached as Appendix G5 to the CBAR. There are two existing boreholes on site. One is unused (BH1) and the other is operational (BH2). Both boreholes are located on the southern extent of the site where the activities are proposed. The BH2 - Lat: -26.00006 Long: 27.46027 is currently equipped and in use on the property. It is anticipated that the municipality will make optimal use of existing infrastructure by using the borehole for the water supply needs for the cemetery and waste transfer station. The investigation however was not able to measure the depth, yield, water level and water quality during the site visit/investigation. Information was obtained from existing databases for the area.

The investigation indicates that the site has a moderate to high groundwater potential. The average borehole yield in the area is 2.4l/s. The average water levels are anticipated to be 28.41 metres below surface in the area (elevation 1574m absl). No water samples were collected during hydro census, but the existing data from the NGDB database suggest that water quality in the study area as potable. Neighbouring landowners further north of the site (elevation 1535m absl) have indicated that borehole levels are at 16-17m below surface and in instances 12m below surface.

The investigation indicates that there is a potential, depending upon the background environment, for increased pH resulting from high proportion of calcium. **But due to the soils on site only being slightly permeable the risk of pollution from the cemetery is thought to be low (WSM Leshika, 2014).** According to DWA's protocol, Cemeteries pose a negligible threat to ground water due to the very slow rate of decay and the rapid die-off of bacteria and viruses.

Both the cemetery and waste transfer station are considered low water users.

Does the activity require a water use permit from the Department of Water Affairs?	**YES**	NO

If yes, list the permits required

A WULA application will be submitted to Department of Water and Sanitation as per the Section 21 water uses of the National Water Act, 1998.

Section 21 (c): Impeding or diverting the flow of water in a watercourse; and
Section 21 (i): Altering the bed, banks, course or characteristics of a watercourse
Section 21 (g): Disposing of waste in a manner which may detrimentally impact on a water resource

It is not yet known whether the existing borehole on site has a permit. It should be determined whether water could be abstracted under a General Authorisation or whether it is to be included in the WULA application. If a water permit is required in this regards then application will also be made for:

Section 21 (a): Taking water from a water resource

If yes, have you applied for the water use permit(s)?	YES	**NO**

If yes, have you received approval(s)? (attached in appropriate appendix)	YES	**NO**

3. POWER SUPPLY

Please indicate the source of power supply eg. Municipality / Eskom / Renewable energy source

There currently is electricity supply to the property. The proposed facilities would tap off this supply. It is thus anticipated that the source of electricity for the cemetery and waste transfer station would be Eskom.

The cemetery would be a low power user. The waste transfer station is also anticipated to be a low power user.

If power supply is not available, where will power be sourced from?

N/A

4. ENERGY EFFICIENCY

Describe the design measures, if any, that have been taken to ensure that the activity is energy efficient:

Cemetery: None has been determined yet, but the designs will take into account energy efficiency.

Waste Transfer Station: A small guard house and ablution facility will be constructed on site. Site lighting will be provided by the municipality. Wastes will not be sorted on site; therefore no form of mechanical sorting will be undertaken. Energy efficiency measures were therefore not required as part of the design.

Describe how alternative energy sources have been taken into account or been built into the design of the activity, if any:

None is anticipated as the activities are not high energy consumers. Renewable energy sources such as the use of solar power will be investigated as an alternative energy source.

SECTION E: IMPACT ASSESSMENT

The assessment of impacts must adhere to the minimum requirements in the EIA Regulations, 2014, and should take applicable official guidelines into account. The issues raised by interested and affected parties should also be addressed in the assessment of impacts as well as the impacts of not implementing the activity (Section 24(4)(b)(i).

1. ISSUES RAISED BY INTERESTED AND AFFECTED PARTIES

Summarise the issues raised by interested and affected parties.

Overall residents and I&Aps are not concerned with the proposed cemetery accept for potential ground and surface water pollution, traffic/parking at entry to cemetery and safety issues due to residual land on the study site. Still they have raised the concern regards to poor service delivery and mentioned that they are concerned that the proposed Magalies Transfer Station will not be managed well, and that wastes will not be removed as undertaken by the local municipality resulting in its overfill and associated nuisance impacts (odours, visual impact, windblown contamination). The local landowners indicate that there will be added waste contributors from proposed settlement developments in the area, which have not been taken into consideration by the applicant. The sentiment is that the transfer station would eventually become overcrowded and result in a dump site. This would have a detrimental impact on the tourism facilities in the area.

Based on this economic concern a guest house south west of the site has requested the consideration of an alternative site for the waste transfer facility.

An edible oil factory located west of the site is concerned with health impacts that may transpire from the waste transfer station and influence activities at the factory and staff residences.

Department of Water and Sanitation requires a Section 21 water use license application for development of the cemetery in proximity (within 500m) of the wetland and the disposal of water from a grease trap into a septic tank/container.

Summary of issues raised w.r.t. the Cemetery:

- Potential risk for groundwater pollution;
- Potential impact on the wetland on site;
- Potential safety and security risk (vagrants and other criminal elements can use the cemetery as an area for cover and for illegal activity
- Unmanaged land on the study site may result in a safety and security issue;
- Economic concerns: Property devaluation can be anticipated due to unmanaged vacant land next to small holdings and farming areas;
- Increased traffic will be experienced in the immediate area, may lead to further road degradation and congestion;
- Additional access points from the R509 and slow turning vehicles to the facilities will result in a safety risk;

Summary of issues raised w.r.t. Waste Transfer Station:

A consistent list of community concerns regarding transfer facilities, include:

- Nuisance/quality of life concerns – dust and odours, noise levels, visual impacts, and
- concerns about rodents and vermin;
- Traffic concerns – congestion and increase local traffic in immediate area;
- Economic concerns – impacts on property values and impacts on business attraction

and retention;
- Health and safety concerns – primarily related to respiratory concerns and truck traffic.

These concerns were echoed in the public participation process for the proposed facility. Concerns raised were:

- May potentially cause groundwater and surface water pollution.
- The facility is neither needed nor desired. Where will the waste originate from to feed into the facility? Local community dispose of their own waste at the Ga-Mohale landfill;
- There will be litter and windblown contamination associated with the facility. There is no guarantee that facility will be well managed (kept clean, litter free)
- What is the estimated increase in traffic from the facility?
- Operation of the facility will increase traffic in the immediate area, cause road degradation due to use by heavy trucks;
- What are the capacity / volumes of waste that will be stored at the transfer station?
- Will pose a safety and security risk due to lure of squatter camps, vagrants and waste pickers;
- It will impact on surrounding land uses (tourism facilities-guest house);
- It will omit unpleasant odours and cause air pollution (dry dusty waste)
- The facility will be unsightly and will have a negative visual impact on the local area, motorists and tourists;
- It will increase noise levels in the area. The loading and offloading of waste by heavy vehicles will generate high noise levels;
- The facility will result in litter/stray pieces of litter in and around the facility and also result in litter from windblown contamination.
- Pose a health risk due to attraction of pests and rodents;
- It will impact on neighbouring land uses. It is adjacent to an edible oil factory, Amanah Oil CC which may pose a health risk;
- It will be operated by the local municipality. Municipal strikes induce littering in local area. May result in decline of tourists to the area;
- An alternative locality must be considered for the facility. It is too close to tourism facilities;
- Windblown contamination (plastic, paper etc) may pose a risk to cattle and result in livestock fatalities;
- What containment measures are in place for windblown contamination/plastic, papers to be contained to site?
- Property devaluation will take place due to the new developments. These are sources of potential pollution and degradation of the aesthetic value of the area;
- Will impact on economic (tourist) activities in the area;

The feedback at the public meeting on 12 September 2015 was that the waste transfer station is a costly short term solution for the area. MCLM should focus on a long term waste management solution in which it is to identify and establish a landfill site for the local area. The WTS will not address the waste management issues for the area in the long term.

Attendees indicated that the waste transfer station is only supported if it is planned in combination with a local landfill site and if the applicant undertakes to comply with the EMPr Good House Keeping recommendations of removing waste on a daily basis.

Concerned regarding potential risk for ground water pollution with development of the cemetery: A Geohyrdological Investigation was conducted to determine the impact on groundwater. Refer to Appendix G5 for the specialist report. The expected impact of the cemetery on the groundwater will be negligible due to the very slow rate of decay and the rapid die-off of bacteria and viruses. The soils on site are only slightly permeable resulting in a low potential for contamination. No burial sites will be situated within 75m of any borehole. Monitoring boreholes are proposed upstream and downstream of the facilities as a monitoring measure. Also one of the aspects the Environmental Management Progamme (EMPr) addresses is pollution prevention.

The geological requirement for cemeteries is a clay-sand mix of low permeability. The study site soils fit these criteria. Areas identified in the geotechnical investigation as seepage area, a drainage area have excluded from the development footprint area.

Concerned regarding the potential impact on the wetland on site: A wetland delineation and function assessment was conducted for the site. Refer to Appendix G3 under specialist reports. The wetland is protected by the National Water Act, 1998. No development may take place within the recommended 32m bufferzone from the wetland. The wetland and seepage area has been excluded from the development layout and will be conserved. Potential impacts from development were considered and can be managed in line with the EMPr.

Concerned regarding safety and security risk relating to vagrants and other criminal elements which may use the cemetery as an area for cover and for illegal activity: The cemetery will be fenced off and security controlled. The municipality will provide lighting which will provide visibility during the night and security personnel will guard the cemetery during the day and at night. The remaining land not to be developed on the study site will left fallow for grazing. Precautionary measures are addressed in the EMPr for the project.

Concerned that remaining land on the study site will not be managed by the local authority: The remaining land will be left fallow and will be used for agricultural purposes. It is currently used as cattle grazing.

Concerned that WTS & cemetery will depress property values: The proposed Magalies Cemetery will be established next to the existing cemetery. Property devaluation on surrounding small holdings would therefore (if applicable) have taken place with the initial establishment. The impact from the planned cemetery is therefore considered insignificant. It would be associated as one in the general public eye.

Waste transfer stations are not landfill sites, but do present some concerns on a lesser scale. The facility is proposed within a rural area and would be bordered by a cemetery in the west and an edible oil facility in the east. The facility will be separated from the small holdings (land uses that may feel property devaluation) by the regional road and railway line. This facility would be fully enclosed. Concerns from the facility can be addressed by a well-managed waste

facility and the current facility design.

Concerned regarding increase in traffic & road safety due to waste transfers station and creation of access points: The facilities will increase traffic in the immediate area. More specifically the waste transfer station. Additional access points will not be created. The existing entrance will be beautified and upgraded from the R509.

The primary aim with a transfer station is to reduce the cost of transporting waste to disposal facilities. Consolidating smaller loads from collection vehicles into larger transfer vehicles reduces hauling costs by enabling collection crews to spend less time traveling to and from distant disposal sites and more time collecting waste. This also reduces fuel consumption and collection vehicle maintenance costs, plus produces less overall traffic, air emissions, and road wear.

Concerned with the need for the waste transfer station: Currently the local community disposes of their waste at the Ga-Mohale Landfill site. This landfill site is set for closure. Once closed there will be no other disposal facility within 40km of the study area, which is the regional Luiperdsvlei Landfill site. MCLM requires a waste transfer station in the local area to temporarily store waste collected in the area before transporting it in bulk to the regional land fill site. The consolidation of smaller loads from collection vehicles, public vehicles into larger transfer vehicles will reduce hauling costs and would benefit the local community.

Concerned regarding littering and windblown contamination from the waste transfer station: The waste transfer station will have a 2.4m high perimeter brick wall which will contain litter to the storage facility. It will be recommended with the EMPr for the project that all incoming and outgoing loads are to be covered. Furthermore daily litter inspections and pick up at the facility and surrounding areas will be recommended. Importantly the facility must be kept clean, waste must be removed on a regular basis to avoid overfilled bins and consequential littering and windblown contamination.

Concerned regarding ground and surface water pollution from the waste transfer station: All surface areas in the facility will be hard impervious surfaces. An earth berm/drain will be constructed and divert storm water away from the facility. A grease trap will be situated at the lowest point of the graded site. All stormwater and water from hosing down the tipping floor will flow to the grease trap. Water from the grease trap would either flow to a septic tank/other container. The septic tank/other container will be emptied by the municipal sewage service provider for disposal at the Municipal Sewage works. Waste will be stored in lined bins.

The EMPr compiled for the cemetery and waste transfer station will address pollution prevention.

Estimated traffic increase from the waste transfer facility: Only 20 private vehicles are anticipated to frequent the waste transfer station on a daily basis. There will only be x2 Two ton trucks (not considered heavy vehicles). There will be 1 municipal compactor truck.

Concerned regarding the potential safety and security risk of a waste transfer station. It would lure squatter camps, vagrants and waste pickers: Waste pickers and /or recyclers

will not be allowed to collect wastes from this facility. The site will be walled off and have a security access. The remaining land excluded from development due to a seepage area, drainage area and excavation difficulty will not be fenced in with the cemetery. It will remain fallow and will be used for agricultural purposes. It is currently used for grazing.

The waste transfer station will impact on the tourism based facility: The waste transfer station may have potential nuisance impacts ito noise, odours, visual impacts. But these are addressed in the EMPr for the project which will address negative impacts which may impact on tourism based facilities in the area. Rendering any negative impacts as negligible. Good facility management measures can curb such nuisance impacts and deem impacts on the tourism facility negligible.

Concerned regarding nuisance impacts such as noise, odour, and visual impact of the waste transfer station: From a visual perspective a 2.4m high brick wall will enclose the facility. This will screen the facility from adjacent and surrounding landowners/uses. This is a formally constructed facility. The ramp and concrete slabs were waste skips will be stored will be roofed with a corrugated iron roof. This will prevent rainwater from entering the skips, will also provide shade. Resulting in less water and sunlight exposure which will prevent bad odours. First Inn and First out waste handling principles will be implemented. Regular removal of the waste will take place and the transfer station will be kept clean inline with the EMPr for the project which should address these concerns. 90% of incoming waste to the transfer facility will be removed per day, with only 10% of the daily income left overnight at the waste transfer station.

Primary sources of noise would be loading and offloading of the municipal compactor and the bin removal vehicle. There would not be any facility equipment producing noise. Due to the enclosed nature of the facility noise will be controlled to site. The R509 regional road is situated along the southern boundary also creating / existing background noise. The facility will be directed to this existing source. Operations of the facility can be controlled by limiting facility activities to business hours 08h00 – 17h00. Vegetation planting (trees) along the boundary of the cemetery and waste transfer facility will further screen the facility from holdings south of the study site, provide a buffer for noise, wind, can assist in the absorption of seepage and decay products from the cemetery.

Concerned regarding the health impact that may derive from a waste transfer station such as rodents and pests: Such impacts pertain to management of the facility and removal of waste on a regular basis. This can be addressed by screening openings in and around buildings, waste containers / holding areas, removal of waste on a regular basis and cleaning the drop off area daily. Waste will be removed on a regular basis. Routine inspections for potential rodent habitat and corrective action will be recommended in the EMPr. Importantly the use of rodent control specialists as necessary.

Concerned regarding littering due to municipal strikes in the direct area. This will result in decline in tourists to the area: The waste transfer station will be operated and managed according to its Environmental Management Programme. The waste transfer station will receive waste on a daily basis and 90% of the incoming waste will be removed again to the

regional landfill site. If such strikes occur the local municipality would need to hire a private service provider to collect the waste, clean the litter and operate the waste transfer station for the duration of the strike.

Concerned about parking space for vehicles attending funerals: Mogale City Local Municipality states that the parking space in front of the old cemetery is sufficient to service the new cemetery.

The WTS should be moved to the back of the property. The applicant has indicated that the waste transfer station will be enclosed with a 2.4m high wall to screen the facility operations and have undertaken to remove the waste at the transfer station on a daily basis. The main management measure for the transfer facility is regular removal of waste to the regional landfill site. The transfer station is also placed along the R509 for ease of access and to capitalize on the existing warehouse on the property which will form part of the transfer station infrastructure. The location for the transfer station was therefore not reconsidered by MCLM.

The WTS is a short term solution, why does MCLM not implement a long term solution by identifying and establishing a landfill site. The local area requires a landfill site to manage the waste. MCLM is proposing too many new housing developments in the area to only be serviced by a waste transfer station. MCLM has indicated that the identification of land for a new landfill site for the area is on-going but the challenge remains land availability.

MCLM started the project due to GDARD pressurising the municipality to close down the Ga-Mohale dump site. MCLM needs to construct the waste transfer station to serve as a transfer point/consolidation point for waste and to form a link with the existing regional landfill site. A facility is required now. A dump site will take too long to plan, get permits for and would take too long to establish, at least 3 years. MCLM can construct the waste transfer station now to serve as a solution for the needs of the specific area. It is in the planning of the municipality to eventually identify and establish a landfill site, but it is not in this timing schedule of the waste transfer station.

Please refer to Appendix E6 for the Issues and Response Report Version 2 which contains the full comments and responses recorded for the project during the public participation process.

2. IMPACTS THAT MAY RESULT FROM THE CONSTRUCTION AND OPERATIONAL PHASE

Briefly describe the methodology utilised in the rating of significance of impacts

A range of methods were used to identify and assess potential impacts during the Basic Assessment process.

A. DESKTOP ANALYSIS

The potential impacts are identified on a basis of baseline site investigations, desktop analysis, literature review and use of Global Information Systems to assess the study site.

B. SITE INSPECTION

The environmental consultant and specialists conduct a site visit and identify potential sensitive environments such as streams, wetlands, and ridges. These areas are then red-flagged to be

investigated further and excluded from development.

C. SPECIALIST STUDY FINDINGS

Specialist Studies required for the study site is based on site inspections and desktop analysis outcomes. The specialists assess identified impacts which require further investigation. The minimum requirement for responsible specialist studies is conducted (determined by GDARD). These include an Ecological assessments, heritage impact assessments, wetland delineation. Also a search of red data flora on site. The findings of such specialist studies will highlight potential impacts on protected or endangered species or environments and present management measures to address such impacts.

D. PUBLIC PARTICIPATION

Conducting the public participation process will produce a list of issues gathered form landowners, I&APs. Such a list needs to be screened for relevant impacts, which then need to be addressed, by specialist studies or further investigation.

.

E. GDARD REVIEW

GDARD reviews the application and the different sub-directorates within the department give comments to the relevant environmental officer. The issues identified are forwarded to the environmental consultant and these issues are addressed or translated as impacts.

F. IMPACT SIGNIFICANCE RATING

The Information Series booklet no 5 *Impact Significance of the Integrated Environmental Management* published by DEAT (2002) was used to set the criteria for impact magnitude and significance rating. The concept for impact significance according to Thompson (1998, 1990), as per the booklet, is that the significance of an impact is an expression of the cost or value of an impact to society. The following criteria for Impact Significance were used in calculating the significance rating of the possible impacts as described in the table below. It has been chosen to suite the impact significance table provided in the Basic Assessment Report.

Impact Magnitude and Significance Rating	Description
High	Of the highest order possible within the bounds of impacts that could occur. In the case of adverse impacts, there is no possible mitigation that could offset the impact, or mitigation is difficult, expensive, time consuming or some combination of these. Social, cultural and economic activities of communities are to such an extent that these come to a halt. In the case of beneficial impacts, the impact is of a substantial order within the bounds of impacts that could occur.
Medium	Impact is real, but not substantial in relation to other impacts that might take effect within the bounds of those that could occur. In the case of adverse impacts, mitigation is both feasible and fairly easily possible. Social, cultural and economic activities of communities are changed,

	but can be continued (albeit in a different form). Modification of the project design or alternative action may be required. In the case of beneficial impacts, other means of achieving this benefit are about equal in time, cost and effort.
Low	Impact is of a low order and therefore likely to have little effect. In the case of adverse impacts, mitigation is either easily achieved or little will be required, or both. Social, cultural and economic activities of communities can continue unchanged. In the case of beneficial impacts, alternative means of achieving this benefit are likely to be easier, cheaper, more effective less time-consuming.
No impact	Zero Impact

Simplified it means:

"Significance"- attempts to evaluate the importance of a particular impact with mitigation measures included and also excluded. The significance was calculated using the following formula:

Significance = Extent + Duration + Intensity X Probability

High - Whereby effects will be long term on social, economic and/or bio-physical environment. These will need to be considered as constituting usually long term change to the environment and can result in severe to very severe effects.

Medium - Where impacts will result in medium- to long-term effects on the social and/or natural environment. These impacts will need to be considered as constituting a fairly important and usually medium term change to the environment, these impacts are real but not substantial.

Low - Where impacts will result in medium to short term effects on the social and/or natural environment. These impacts are not deemed largely substantial and are likely to have little real effect.

Significance Rating of impact: Positive (+)
Significance Rating of impact: Negative: (-)

Without mitigation measures (WOMM):

- **Low:** the impact is of little importance, but may require some mitigation
- **Medium:** the impact is of importance and is therefore considered to have a negative impact. Mitigation is required to reduce the negative impacts to acceptable levels.
- **High:** the impact is of major importance and mitigation is essential. Failure to mitigate, with the objective of reducing the impact to acceptable levels, could render the entire development option or entire project proposal unacceptable.

With mitigation measures (WMM):

- **Low:** the impact will be mitigated to the point where it is of limited importance;

- **Medium:** despite the successful implementation of the mitigation measures that reduce the negative impacts to acceptable levels, the negative impact remains significant. However, taken within the overall context of the project, the persistent impact does not constitute a fatal flaw.
- **High:** The impact is of major importance. Mitigation of the impact is not possible on a cost-effective basis. The impact is regarded as high importance and taken within the overall context of the project, is regarded as a fatal flaw. An impact regarded as high significance, after mitigation could render the entire development option or entire project proposal unacceptable.

Briefly describe and compare the potential impacts (as appropriate), significance rating of impacts, proposed mitigation and significance rating of impacts after mitigation that are likely to occur as a result of the **CONSTRUCTION PHASE** for the various alternatives of the proposed development. This must include an assessment of the significance of all impacts.

PROPOSAL – CONSTRUCTION OF THE CEMETERY AND THE WASTE TRANSFER STATION

Potential impacts:	**Significance rating of impacts (positive or negative):**	**Proposed mitigation:**	**Significance rating of impacts after mitigation:**	**Risk of the impact** and **mitigation not being implemented**
Impact on Geology				
During establishment of the cemetery, excavations will be made for a septic tank. This may impact on the Geology.	Medium (-)	Large rock boulders and rock outcrops may be encountered in the soft excavation sections. The soils are considered to have a medium susceptibility to erosion. The site has a medium to high heave (swell) potential. Expansion is a major factor on site. **Mitigation:** • Trenches should not be opened too far in advance as the possibility of sidewall collapse and trench flooding is a high probability, mostly during and after rains; • Additional material may be required to fill the consolidated sections of trenches due to medium-high consolidation of soils. • Do not allow trenches to stand open for longer than 2 days were possible. Excavations should preferably be opened and closed at the same time; • NO trenching through wetlands or the drainage line may be undertaken. Seepage areas and the drainage area are excluded from the development area.	Low	Low
During the construction of the waste transfer station excavations will be made for a grease trap and septic tank. This may impact the underlying geology.	Medium (-)	The same mitigation measures applied for the impact on geology from cemetery establishment excavations are to be applied to the waste transfer station.	Low	Low
Impact on Topography				
During the construction of the waste transfer station, the site will be graded to slope into a single sump or grease trap. A cut-off drain will be constructed along the boundary of the waste transfer station to prevent storm water from adjacent areas to enter the site.	Low (-)	None is required.	Insignificant	None
Soils and Land Capability				
Exposure of soils during construction of the cemetery and waste transfer station, as vegetation will be cleared for construction purposes.	Medium (-)	The soils have a medium susceptibility to erosion. The site has a medium to high heave (swell) potential. Progressive vegetation clearance will take place for the cemetery. The entire footprint / area for the waste transfer station will be developed with an impermeable surface. **Mitigation:** • Topsoil is to be handled twice – once to strip and stockpile, and	Low	Very Low

		once to replace and level; • Ensure that topsoil is not buried, mixed with spoil (excavated subsoil), rubble or building material, or subjected to compaction or contamination by vehicles or machinery. • Only remove topsoil within the demarcated development area. No vegetation/topsoil may be removed within 100m of the wetland and not within the delineated seepage areas. If not implemented it will result in erosion and siltation into the these sensitive areas as evident to the north of Amanah Oil CC.		
Erosion of topsoil due to storm water runoff, siltation of watercourses	Medium (-)	• Ensure that topsoil stockpiles are stored in such a way and place that it will not cause damming up of water, erosion gullies, or wash away itself; • Protect topsoil and do not stockpile in heaps exceeding 2m in height;	Low	Very Low
Soil Contamination from accidental leaks and spillages of hydrocarbons from construction vehicles and machinery. Infiltration of cement and products mixed directly on the ground may cause soil contamination.	Medium (-)	• All construction vehicles and machinery should be kept in good working order to avoid fuel and oil leaks; • Vehicles and machinery displaying signs of leakage should be removed from site and necessary repairs should be undertaken off-site at an appropriate workshop area; • Carefully control all onsite operations that involve the use of cement and concrete after the completion of tasks; • Limit cement and concrete mixing to single sites where possible; • Use plastic liners or trays when mixing cement and concrete. Do not mix cement directly on the ground.	Low	Low
Impact on Land Use				
The construction activities of the cemetery and waste transfer station may impact on, on-site, adjacent and surrounding land uses	Low (-)	The current land use pertains to an automotive workshop. This will cease prior to construction of the facilities. The rest of the property is fallow and used for agriculture / grazing. Amanah Oil CC is located next to the development site. The impacts will be of short duration. Control and mitigation of nuisance impacts are required in terms of noise, air quality (fugitive dust), visual impact and traffic.	Very Low	Low
Flora impacts:				
Destruction of natural vegetation	Medium (-)	• Access roads in the cemetery in areas of rocky grassland should preferably align along the western or eastern boundary walls, to prevent fragmentation of the rocky grassland; • Cemetery and waste transfer station footprint have been set on transformed area, the secondary- and mowed grassland, as well as the rocky grassland between the mowed- and secondary grassland, provided that species of concern are relocated;	Medium to Low	Low

		• Areas of Medium (Rocky grassland-good state) and Medium High (Moist Grassland) floral sensitivity are being excluded from the cemetery and transfer station development area. This area will be left fallow and will not be fenced in the proposed facilities; • An ECO should be appointed to oversee the construction; • Construction activities and related impacts such as construction camps and storage areas, should be restricted to disturbed areas (transformed area, mowed – and secondary grassland); • Camps & storage of equipment should be located outside of rocky grasslands on site and not impact on vegetation adjacent to site; • Only remove vegetation where necessary and restrict disturbances to a minimum; • Demarcation must be erected around construction area to prevent access to sensitive environs; • Prohibit vehicular or pedestrian access into natural areas beyond the demarcated boundary of the construction area; • Formalise access roads and make use of the existing /historical roads footprint, rather than creating new routes through naturally vegetation areas; • Construction access road must not be wider than 3m in sensitive areas; • Post construction land must be cleared of rubbish surplus materials, and equipment, and all parts of the land must be left in a condition as close as possible to that prior to construction; • During construction, grassland can be removed as sods and replanted during rehabilitation of the areas affected by construction.		
Exposure to erosion and subsequent sedimentation of moist grassland	High (-)	• Protect area susceptible to erosion, ensure no undue soil erosion resultant from activities within adjacent to the construction camp and works area; • No activities should take place within the extent of the wetland and riparian conditions; • Retain vegetation and soil in position for as long as possible, removing it immediately ahead of construction; • Remove only vegetation vital for construction and do not allow disturbance to the adjoining natural vegetation cover; • It is recommended that grasslands in the way of construction, be removed as sods that can be replanted as part of rehabilitation.	Medium to Low	Low
Possible destruction of plants of conservation concern	High (-)	• Declining geophytes *(Boophone distichia, Eucomis autumnalis* and *Hypoxis hemerocallidea) and* provincially protected *(Gladiolus* species and *Habenaria* species*)* could be impacted by construction activities. These species should be removed and relocated to suitable habitat outside of the construction footprint or used as part of rehabilitation of	Medium-Low	Low

		disturbed areas. (Removal requires permission from GDARD); • Construction workers may not tamper or remove these plants and neither may anyone collect seed from the plants without permission from the local authority; • Cordon off sensitive vegetation that stock protected plant species and plants of conservation concern to protect it from construction activities and vehicles;		
Spread of alien invasive vegetation	High (-)	• Alien invasive species identified on site should be removed prior to construction; (positive curb spreading to adjacent areas); • Manual removal is preferred to mechanical removal; • The weed Campuloclinium macrocephalum (pom-pom weed) should be eradicated prior to any disturbances. This weed reduces grazing capacity and will spread easily to surrounding vegetation.	Low	Low
Risk of the impact and **mitigation not being implemented:** The impacts identified are anticipated to take place if not managed. It is therefore imperative that it is managed. The risk is therefore low. An ECO will be appointed on the project to ensure compliance.				
Impacts on Fauna				
Destruction of important bird, mammal and reptile habitat – site could provide habitat to important faunal species (mammals, reptiles, birds)	High- Medium (-)	• A limited number of fauna was recorded on site during investigations. The area most suitable for faunal species pertains to the drainage area/moist grassland habitat and good condition rocky grassland vegetation types. These habitat have been excluded from the development layout of the cemetery and waste transfer station; • The drainage feature is of low importance for migration, breeding and or feeding site; • The seepage areas and drainage line will serve as a corridor of connectivity that will be retained. • No wild animals may under any circumstance be handled, removed or be interfered with; • No construction or related activities should be allowed within sensitive habitat (drainage line); • All construction areas should be demarcated prior to construction to ensure that the footprint of the impacts is limited. This includes areas where vehicles may traverse)	Low	**Low**
Indirect impact that may occur is poaching / theft of livestock	Medium (-)	No animals should be intentionally killed or destroyed and poaching and hunting should be not be permitted on site.	Low	Low
Aquatic Ecosystem:				
The identified potential impacts on the wetland and	Medium	• **The unchannelled valley bottom wetland as well as the**	Low	Low

seepage area from the construction of the cemetery and waste transfer station include: • Changing the quantity and fluctuation properties of the watercourse by changing runoff characteristics of the area surrounding the wetland (by for example compacting soils) • Changing the amount of sediment entering water resource and associated change in turbidity (increasing or decreasing the amount) • Alteration of water quality – increasing the amounts of nutrients (phosphate, nitrite, nitrate) • Alteration of water quality – toxic contaminants (including toxic metal ions (e.g. copper, lead, zinc) and hydrocarbons Source of threat: ✓ Vehicles driving in / through the watercourse; ✓ Lack of adequate rehabilitation resulting in invasion by invasive plants		**identified seepage area has been excluded from the development footprint area;** • **A buffer zone of a 100m has been implemented from the cemetery (cemetery being the closest land use) to the wetland;** • The buffer area should be cleared marked during construction and workers must be informed that activities and traffic beyond the buffer zone must be limited to only that which is necessary; • Strict management measures should be followed to protect the downstream sections of the drainage feature; • Formalise access roads and make use of existing roads/tracks where feasible, rather than creating new routes through naturally vegetated areas; • Management of on-site water use and prevent storm water or contaminated water directly entering the watercourse; • Alien plant eradication and follow up control activities prior to construction to prevent spread into disturbed soils, as well as follow up control during construction; • The amount of vegetation removed should be limited to least amounts possible; • Rehabilitation of damage impacts that arise as a result of construction must be implemented immediately upon completion of construction; • Protected all areas susceptible to erosion and ensure that there is no undue soil erosion resultant from activities within and adjacent to the construction camp and work area; • Runoff from the construction area must be managed to avoid erosion and pollution problems; • Implement buffer zones to trap sediments; • Provide adequate sanitation facilities located outside the wetland area or its associated buffer zone; • Implementation of appropriate storm water management around the excavation to prevent ingress of run-off into the excavation and to prevent contaminated runoff into the watercourse; • After construction, the land must be cleared of rubbish, surplus materials and equipment and all part of the land shall be left in a condition as close as possible to that prior to use.		
Surface and Ground water Pollution				
Increased storm water runoff result in erosion, siltation of	Medium (-)	• Stockpiles should not be placed in proximity to stormwater culverts	Medium-Low	Low

wetland		or channels to avoid soils from entering storm water which could lead to sedimentation of nearby water bodies; • Rehabilitation of disturbed areas must be undertaken as soon as possible to avoid soil erosion; • Protect all areas susceptible to erosion and ensure that there is no undue soil erosion resultant from activities within and adjacent to the construction areas;		
Contaminated surface water could flow into the wetland area and negatively impact on the wetland	Medium (-)	• Do not dump any waste of any nature, or any foreign material into the unchannelled valley bottom wetland; • Deflect any unpolluted water/runoff away from any dirty area;	Medium-Low	Low
Accidental hydrocarbon spillages from construction vehicles on site, could lead to contamination of surface water. Contamination of surface water may infiltrate and lead to groundwater contamination affected both surface and groundwater quality. The Magalies rural area is dependent on groundwater. Contamination of groundwater due to accidental hydrocarbon leaks and spillages could negatively impact on downstream water users (Indirect Impact)	High (-)	Seasonal seepage water of less than 0.40 m below ground level will be a reality throughout the majority of the site. The site may be affected by seasonal flooding. A Floodline determination is essential. Localised areas of surface ponding conditions can be expected. Saturated soil conditions and a seasonal perched groundwater table or seepage water conditions may however be present, especially during and after heavy and/or continuous downpours. • Clean small oil or fuel spills with an approved absorbent material (eg. Sawdust, “Drizit” or “Spill-sorb”) • Contain oil and fuel spills in water using an approved oil absorbent fibre; • Treat soil contaminated by oil or fuel by removing the soil to depth of contamination and dispose of it at a registered Hazardous Waste Landfill site; • Construction vehicles and machinery should be kept in good working order to avoid fuel or oil leaks; • Immediately clean any accidental oil or fuel spillages or leakages; • Carefully control all on-site operations that involve the use of cement and concrete.	Medium	Very Low
Noise Impact				
Increased noise levels in rural area due to use of construction equipment, vehicles, and excavations. Will cause nuisance impact to neighbouring properties and small holdings	Medium (-)	• Normal working hours must apply (i.e. 07h00am – 16h30pm Mondays-Fridays); • Respond to community complaints with regard to noise generation, taking reasonable action to ameliorate the impact; • All equipment on site should be kept in good working order: • No load music will be permitted on site;	Low	Low

		• The contractor will take preventative measures (screening, timing, pre-notification of affected parties) to minimize complaints regarding noise nuisances from sources such as power tools; • Notify adjacent landowners prior to undertaking activities that may generate high noise levels that may cause a nuisance.		
Visual Impact				
The construction of the cemetery and waste transfer station may cause visual intrusion to motorists and neighboring properties as well as small holdings across the R509 Magaliesburg/Koster Road. The sources of impact include: • Removal of vegetation, topsoil stripping; • Use of construction equipment; • Creation of access roads;	Medium (-)	• Screening of the construction camp and lay-down areas is recommended as to shield construction activities from adjacent landowners, surrounding land uses to minimize the visual impact where this is feasible possible, and where this is required; • Rehabilitation should be initiated timeously so as to minimize duration of exposure of bare surfaces; • Lighting at the construction yard will be sufficient to ensure security but will not constitute illumination/light pollution to surrounding areas;	Low This is an easily reversible impact.	Low
Air Quality				
The increased dust and exhaust fumes created during construction phase of the cemetery and waste transfer station. (Under windy conditions) may impact on the local area (mostly adjacent factory and residential units) and the local area by impacting on the ambient air quality. There is however a vegetation barrier (Eucalyptus trees) along the boundary of the development site. Providing screening and a semi-dust barrier to the edible oil factory premises. Sources of fugitive dust or emission may come from: • Vegetation clearance; • Creation of internal roads for the facilities; • Upgrading of existing access entrance; • Emissions from construction vehicles used on site; • Construction vehicles travelling on dirt roads;	High - Medium (-)	• Dust from the construction site must not disturb economic or social activities in the vicinity of the construction site; • Minimize dust generation activities especially during strong winds and also employ gravel road dampening as a mitigation measure for dust generating activity's; • Avoid excessive movement of construction vehicles over un-surfaced roads; • Vehicles speeds should be controlled on dirt roads at 40km/h; • Construction vehicles should be kept in good working order and serviced regularly; • Avoid burning of vegetation cover and waste during construction; • Minimize vegetation clearance to reduce exposure of bare soil surfaces.	Low	Very Low
Impact on traffic and road usage				
Increase traffic volumes during construction of the cemetery and waste transfer station due to delivery of construction materials and travelling of such vehicles to	Medium (-)	• Vehicles operators must be suitably licensed, have had an appropriate environmental and safety induction, must be made aware of specific site procedures;	Low	Low

and from the site. Heavy vehicles turning on the R509 Magalies/Koster Road may pose a safety risk.		• Movement of construction vehicles to and from site should be conducted in off-peak traffic flow; • Heavy vehicle crossing signs and entrance road construction signs should be placed along the R509 at the site access construction/upgrading point and at the location of the site; • Caution signs of a 60km/h speed limit shall be placed at regulated distances from heavy vehicle crossing signs along the R509		
Impact on Cultural or Heritage Resources				
No site of cultural or heritage importance was identified on study site. Existing structures on site do not qualify as archaeological or historical remains. Identified sites are referred to as relatively recent past' refers to the 20th century. There is however a possibly of unearthing such resources subsurface during construction activities.	Insignificant	Should any archaeological or any other physical cultural resources be discovered subsurface, heritage authorities should be informed.	Insignificant	-
Impact on Health, Safety and Security				
Increased construction workers/ movement in the local area may threaten the security in the area.	Medium (-)	• Workers must be identified by overalls or the contractors logo; • Workers must not be allowed to trespass on adjacent private and commercial property; • The construction site must be fenced off and have controlled access; • No unauthorized personnel should access the construction site;	Low	Very Low
The health, safety of workers and other personnel utilizing the site and adjacent areas might be at risk if proper preventative measures are not put in place.	Medium (-)	• The contractor must implement standards set out in the OHS Act 85 of 1993). This act aims at protecting workers with regards to their activities at work. • Emergency procedures applicable to the construction phase must be set up prior to commencement of construction activities; • Workers must be supplied with hearing protection if noise levels exceed 85dB (decibels);	Low	Low
Socio-Economic Impact				
Creation of temporary job opportunities for local residents	Positive impact (+)	None required	Not applicable	Not applicable

Nuisance impact resultant from construction activities may potentially impact on surrounding economic activities	Medium (-)	Control and mitigation of nuisance impacts are required in terms of noise, air quality (fugitive dust), visual impact and traffic.	Low	Very Low

NO GO OPTION – CONSTRUCTION PHASE

Potential impacts:	**Significance rating of impacts (positive or negative):**	**Proposed mitigation:**	**Significance rating of impacts after mitigation:**	**Risk of the impact** and **mitigation not being implemented**
None of the identified potential negative and positive impacts will take place which include: • Geology • Soil & Land Capability • Air Quality Impact • Noise Impact • Traffic Impact • Visual Impact • Impact on Fauna & Flora • Surface and Group Water Impact • Job creation (Socio-economic impact)	Low positive impact	None required	Insignificant	Not applicable

All negative impacts associated with construction on the preferred site would be avoided, and the job creation benefits would not be realized.

PROPOSAL – OPERATION OF CEMETERY AND THE WASTE TRANSFER STATION

CEMETERY				
OPERATIONAL PHASE **Potential impacts:**	**Significance rating of impacts**	**Proposed mitigation:**	**Significance rating of impacts after mitigation:**	**Risk of the impact** and **mitigation not being implemented**

	(positive or negative):			
Cemetery: Geological Impact				
Digging of graves in the cemetery may be problematic due to large excavation difficulties in the northern portion of the site	Medium (-)	• **The area depicted as excavation difficulty in the northern portion of the study site has been excluded from the cemetery development footprint along with the seepage area and drainage line;** • The cemetery will comprise areas of soft excavation conditions towards the southern portion of the site.	Insignificant	Very Low – Insignificant **The current layout has been designed to exclude these areas.**
Cemetery: Flora impacts				
Destruction of natural vegetation will take place during: • clearing of vegetation for graves; • trampling of natural vegetation by visitors;	High (-)	• Only remove vegetation where absolutely necessary for graves; • Formalise access roads and prevent trampling, parking or driving through naturally vegetated areas; • Only remove vegetation where absolutely necessary; • Areas consisting good state rocky grassland, moist grassland must be excluded from the development footprint for Phase B of the cemetery to be established in 10 years); • The seepage area is considered a no go area;	Medium (-)	**Low**
Loss of plant species that are declining or provincially protected may take place by: • Clearing of vegetation for graves; • Trampling of plants by visitors.	High (-)	Clearing of vegetation for graves, mowing of grass and trampling of the plants by visitors and vehicles could destroy plant species of conservation concern. A Plant Rescue and Rehabilitation Plan should be implemented. Plants of conservation concern that are deemed to be in the way of graves, should be removed by a suitably qualified specialist and replanted in a pre-determined suitable habitat. The plants could be relocated to the remaining rocky grassland around the moist grassland, or rocky grassland adjacent to the site and north of the existing cemetery. This should only be done with permission of the adjacent landowner and the approving authority, and provided that the relocation process does not impact too much on the rocky grassland. The plants can also be relocated to landscaped areas within the cemetery, e.g. gardens, provided that they are properly maintained.	Medium to Low	Low
Deterioration of natural vegetation on the site, and subsequent loss of ecological function thereof	Medium (-)	• Ensure that maintenance work or operational activities do not take place haphazardly, but according to a fixed plan. • If necessary, the sensitive areas should be fenced off to prevent vehicular and pedestrian access.	Low	**Low** The good state rocky grassland and moist grassland areas will

		• Natural fires should be left to burn the rocky and moist grassland, provided that there is no threat to lives or property. Alternatively, a fire management plan could be adopted whereby the rocky grassland is burnt at regular intervals (e.g. every 3 to 4 years).		not be developed and are excluded from the development footprint of the cemetery. These areas will not be fenced in as part of the cemetery.
Possible increase in exotic vegetation may take place during the operational phase through: • Alien invasive trees spreading to disturbed soils and landscaping within the proposed cemetery	High (-)	The seed of alien invasive plant species that occur on and in the vicinity of the cemetery could spread into the site. In addition, plant species used in the landscaping of the cemetery could include invasive species. • Alien invasive species that were identified within the study area should be removed prior to construction. By removing these species, the spread of seeds will be prevented into disturbed soils which could thus have a positive impact on the surrounding natural vegetation. • All alien seedlings and saplings must be removed as they become evident for the duration of construction. • Manual / mechanical removal is preferred to chemical control. • Only indigenous plant species, naturally occurring within the area that the site is situated in should be used for landscaping in the cemetery.	Low	Medium-Low
Impact on Fauna				
Impact on red listed bird habitat	Medium (-)	✓ The development footprint will not impact on areas of medium-high sensitivity and provided that mitigation measures implemented as per the ecological impact assessment, will have a negligible impact on grasslands of conservation value which are foreseen to be suitable habitat for red listed birds. ✓ Fauna will not really be affected; especially birds will still occur or move to and from site as adequate areas on the project site area being conserved along the drainage line and the good state rocky grassland.	Low	Medium-low
Aquatic ecosystems				
Changing the quantity and fluctuation properties of the watercourse by for example stormwater input.	Low (-)	• The cemetery would consist of limited hardened surfaces and landscaped areas allowing infiltration of rainwater into the ground resulting in limited stormwater runoff from site. • A stormwater management plan should be developed to ensure that high energy runoff does not negatively impact on the wetland • Storm water from the cemetery roads would directed to flow onto the landscaped areas; • A 100m buffer zone is implemented from the cemetery to the wetland; • A Water Use License Application for a Section 21 (i) and (c) will be applied for a	Very Low	Low

		Department of Water & Sanitation due to the proximity (within 500m) of the cemetery to the wetland and a possible seepage area;		
Changing the sediment entering water resource and associated change in turbidity (increasing or decreasing the amount)	Medium (-)	A 100m buffer zone is implemented between the cemetery and wetland to trap sediment.	Low	Very Low
Alteration of water quality	High-Medium(-)	• Regular independent water quality monitoring should form part of the operation procedures in order to identify pollution; • Treatment of pollution identified should be prioritized accordingly	Medium-Low	Medium
Cemetery: Groundwater and Surface water Pollution				
According the Geohydrological Investigation conducted by Naledzi Waterworks, the average ground water levels were considered to be 28.41 metres below surface in the area of the study site. Some areas within the study site indicate ground water levels are substantially shallower towards the drainage area which is evident from a large seepage zone identified during the Geotechnical Investigation by WSM Leshika. The regional area is known for its medium to high potential groundwater potential. The natural piezometric gradient for the site is thought to be in a north easterly direction towards the stream. In order to limit the risk of groundwater contamination, the groundwater table should be more than 2.5m below the bottom of a grave (normally 1.8m deep) for a cemetery site. Thus the groundwater level should be at least more than 4.3m below surface level. **The large seepage zone identified in the Geotechnical Investigation has been excluded from the development layout in order to conform to the requirement of allowing 2.5m below a grave to the groundwater level.** A Hydocensus was conducted as part of the Geohydrological Investigation. 2 Boreholes were identified on site. One being operational and the other not in use. No graves will be placed within 75m of the operation borehole. If groundwater will be used in the project area, boreholes should be registered with Departments Water & Sanitation to ensure that the Magaliesburg Cemetery is an authorized water user and authorization forms must be completed in this regard. The cemetery is proposed with a rural area which is solely dependent on groundwater/boreholes. There are several domestic water abstraction points in and within a 1km radius of the site. The closest abstraction point is an operation borehole on site and a possible abstraction point 100m west of the site at Amanah Oil CC. The geohydrological investigation indicates that the risk of pollution to such is very slight to negligible. It should however be monitored on a quarterly basis.				
Potential impact on groundwater quality (pollution) due to human body decomposition.	Low	The expected impact on the cemetery on the groundwater is expected to be negligible due to the very slow rate of decay and rapid die-off of bacteria and viruses. The soils on site are only slightly permeable resulting in low potential for contamination. • <u>Two monitoring boreholes must be established upstream and downstream of the cemetery as a monitoring measure;</u>	Very-Low to negligible	Low

		• MCLM is to measure the water level in the monitoring boreholes, conduct water sampling and analysis for bacterial indicators on a quarterly basis; • If monitoring demonstrates that groundwater contamination is taking place, burials at the site should be halted while further investigations are undertaken to determine the reason for deterioration. • No burial sites will be situated within 75m of any borehole. There is 1 operational borehole on the study site and corresponds to Phase B of the proposed cemetery. A 75m radius to this borehole must be left as open space where no graves may be established. • Movement by bacteria and viruses is restricted by the root system of plants. Planting of trees and border plants are encouraged around the cemetery to help decrease the movement off-site of bacteria and viruses in seepage water and rain water. • Deep rooted trees consume large volumes of groundwater and seepage water passing through the unsaturated zone. The water level beneath the cemetery will decrease by trees and further help contain seepage within the environ of the cemetery.		
The presence of shallow seasonal perched water table or seepage water conditions may increase the risk for groundwater pollution.	Medium – Low (-)	With implementation of the above management measures and the exclusion of the seepage zone from the cemetery footprint this risk can be lowered.	Low	Very Low
Impact on cultural or heritage resources				
Impact on cultural and heritage resources by unearthing resources during digging of graves.	Insignificant	No sites of significance were identified. Should any archaeological or any other physical cultural resources be discovered subsurface, heritage authorities should be informed.	Insignificant	Not applicable
Cemetery: Traffic Impact and impact on road usage				
Increase in traffic on the R509 during weekdays and weekends	Medium (-)	Increased traffic will be experienced along the R509 Magaliesburg/ Koster Road at the study site existing entrance point. Traffic increase would be predominantly limited to weekends with anticipated 30 private vehicles per week. • The existing entrance will be upgraded to both the cemetery and waste transfer station to allow for unobstructed entry to the facilities; • Adequate parking for vehicles expected to attend funeral processions/ceremonies is available in front of the existing Magalies cemetery; • Funerals should be staggered (only one at a time); • Additional road signage must be placed along the R509 Magaliesburg/Koster Road to signal the entrance point the facilities and speed limits of 60km/hour within the area would need to be enforced;	Low	Low
Cemetery: Noise Impact				

The local area is rural and noise impacts anticipated from the cemetery would be limited to traffic noise and the occasional ceremony during weekends and weekdays.	Low (-)	• Services would be limited to one funeral at a time; • Services would be conducted during day time 08h00am – 16h00pm;	Very Low	Low
Cemetery: Visual Impact				
The presence of graves will distort the natural aesthetic environment. Poor management of the cemetery may further impact on surrounding land uses.	Medium (-)	• The new cemetery will be a natural flow area of the existing cemetery; • The cemetery will be enclosed by a concrete palisade fence; • Trees and border plants should be established along the cemetery borders to screen the graves from the surrounding land uses; • The EMPr should include conditions which ensure that the development is properly maintained so as to minimise potential visual impacts. • All lighting must be faced downward to avoid illuminating neighbouring properties.	Very Low	Low
Socio-economic impact				
Employment creation could improve few household incomes in the long term	Positive impact (+)	None required	Not applicable	Not applicable
Decrease in surrounding property value due to development of the new cemetery within a rural-agricultural-tourism area.	Low (-)	The Magalies Cemetery could potentially result in decrease in surrounding property value and increase in time for holding owners to sell properties. The proposed cemetery will be located next to an existing cemetery and is considered a natural flow area for expansion. The proposed cemetery site is further bordered to its west by an edible oil factory. Depreciation of property values would have taken place with the initial establishment of the existing Magalies Cemetery. Further, review of available literature indicates that there is little evidence to support the notion that cemeteries have a negative effect on property values. Well designed and managed cemeteries have been found to have a positive effect on the values of surrounding properties as they are perceived as open spaces. It is unlikely that the proposed Magalies Cemetery will result in devaluation of surrounding properties. Many negative perceptions of cemeteries are as a result of poor management and maintenance e.g. theft, vandalism, loitering, graffiti etc. The EMPr should include conditions which prescribe management measures to promote good management and maintenance.	Insignificant	Very Low

Air Quality				
Limited to no air quality impacts are anticipated from the operation of the cemetery.	Insignificant	None required	Insignificant	Not applicable
Health, Safety and Security				
Increase in loitering, vagrants and crime in the surrounding area.	Medium (-)	• Access to the cemetery will be controlled. It will be fenced off and a security guard will patrol the cemetery and prohibit unauthorized entry; • Remaining land of Portion 122 of the farm Rietpoort 395JQ will remain open and will not be "walled in" along with the cemetery establishment. The current land use for the remaining land is grazing and it will continue.	Low	Very Low

No Go Option - CEMETERY OPERATION

Potential impacts:	**Significance rating of impacts (positive or negative):**	**Proposed mitigation:**	**Significance rating of impacts after mitigation:**	**Risk of the impact** and **mitigation not being implemented**
Impact on public amenity	High (-)	Alternative sites for development of a cemetery would be required to augment the existing Magalies Cemetery. This will result in an indirect impact of future development potential of the next property sought for such a public amenity which may not be a natural flow area for such as Portion 122 of Rietpoort 395JQ. Mogale City local Municipality would not be the title deed owners of the next alternative site. Illegal burial grounds will continue to increase until the existing public amenities can be augmented in the local area.	Medium (-)	Medium

Potential impacts associated with the operation of the cemetery include:

- Visual impact
- Traffic increase and possible road congestion;
- Noise
- Impact on fauna and flora;
- Health, safety and security impacts
- Surface and Groundwater Pollution

All negative impacts associated with the operation of the proposal would be avoided; the benefit of augmenting the existing Magalies Cemetery and job creation benefits will not take place.

PROPOSAL – OPERATION OF THE WASTE TRANSFER STATION

WASTE TRANSFER STATION				
OPERATIONAL PHASE **Potential impacts:**	**Significance rating of impacts (positive or negative):**	**Proposed mitigation:**	**Significance rating of impacts after mitigation:**	**Risk of the impact** and **mitigation not being implemented**
Land use Impact				
The transfer station may have the following negative impacts on adjacent and surrounding land uses: • Visual impacts; • Odour: Garbage, particularly food waste and grass, has the potential for odour. • Health impact: Rodents and flies can become a nuisance at the waste transfer station and easily spread to adjacent properties/landowners; • Noise generated from tipping of skips and truck traffic could increase noise levels in the area; • Windblown litter from vehicles transporting waste to and from the facility may impact on properties along	Medium (-)	The closest receptors are a staff village at Amanah Oil and wide spread small holdings some 350m south of the site which includes a guest house. Due to the existing noise contributors (R509 Road, Railway line, potential noise sources from Amanah Oil Factory) and the dispersed nature of the small holdings the impact should be low. Proper facility design and well-managed operations can address potential negative impacts and reduce odour problems, visual impacts and health concerns. It has been suggested as part of the waste transfer facility design that waste skips are placed under roof to protect wastes from exposure to heat, sunlight and rainwater entering skips. • "First in, first out" waste handling practices that keep waste on site only for short periods of time must be implemented; • Remove all waste from the tipping floor by the end of each operating day so the surface can be swept clean and washed down; • Mogale City Local Municipality anticipates removing 90% of incoming waste on a daily basis, only leaving 10% of incoming waste overnight at the waste transfer station; • "Good Housekeeping" measures, including regular cleaning and disinfecting of surfaces and equipment that come into contact with waste must be implemented; • Apply water misting and / or deodorizing systems; • Conduct activities that generate the most amount of noise during the day. Mogale City Local Municipality must operate the facility between 08:00 – 17:00 during weekdays. Saturdays the facility can be open to accept drop-offs by the public. No waste should be collected and dropped off at the facility on Sundays or public holidays; • Use landscaping and sound barriers to absorb facility noise. It is currently part of the	Low	Very Low

the transportation routes;		facility design that a 2.4m high wall enclose the waste transfer station; • The Site Manager must implement a pest and rodent management control plan at least every quarterly. Good housekeeping and daily removal of waste and disinfecting surfaces would be the most effective means of minimizing the presence of pests; • Windblown litter will be significantly managed by daily removal of waste and the 2.4m high boundary wall which will enclose the facilities and break wind speeds and sweeping up of waste; • In the course of facility operations, it is likely that stray pieces of waste become litter in and around the transfer station. Waste vehicles should not be overfilled and must be adequately covered with a tarp/netting to prevent windblown contamination; • Patrol nearby access roads to control litter from waste removal vehicle traffic; • The facility design provides adequate space within the facility so that customers waiting to use the transfer station do not interrupt traffic on the regional road or impact on nearby businesses or residences;		
Impact on Flora/Vegetation				
Possible increase in exotic vegetation may take place if disturbed soils are not properly rehabilitated and due to poor vegetation establishment on rehabilitated areas. This could spread into good state rocky grassland and moist grassland areas of medium-high sensitivity.	Medium (-)	The seed of alien invasive plant species that occur on and in the vicinity of the study site could spread into the site. • All alien seedlings and saplings must be removed as they become evident for the duration of construction. • Manual / mechanical removal is preferred to chemical control. • Protect all areas susceptible to erosion (especially stockpiled soils and materials such as sand and tar) and ensure that there is no undue soil erosion resultant from activities within and adjacent to the works area;	Low	Low
Impact on Fauna / Animals				
The study site is frequented by livestock for grazing, stray cats; dogs may also frequent the site. Such animals can consume waste on site if not well managed and if litter occurs. Non-Biological Pest control programs for rodents could have a negative impact on birds, domestic animals which	Medium (-)	<u>Mitigation for impact on fauna from littering/wind blown wastes:</u> • The entry gate proposed for the waste transfer station must be solid to serve as a barrier for noise, visual barrier for internal operations and more over to prohibit entry to the facility by stray animals; • The gate and doors to the waste transfer station must be locked at all times outside operating hours; • Good house keep measures must be implemented and regular cleaning must be undertaken; • Regularly patrol access roads and the outer perimeter of the waste transfer station, including the remaining agricultural land north of the facility for any litter; <u>Biological and Mechanical control of pests and rodents:</u>	Low	Medium (with mitigation risk is very low)

consume poisoned rodents.		Birdlife Africa suggests the use of Biological Pest Control Programmes. • Using Rat Zappers as a mechanical control measure: With this method rodents are enticed into a trap in which they are killed by a quick powerful electric shock (very target specific); • The waste transfer station is proposed with a rural-agricultural area and there are large transacts of open veld which provides suitable habitat for Barn Owls. The use of Barn Owls (Nonnetjies Uil) as a Biological control measure could be suitable. These owls can contribute significantly to the control of rats and mice. Barn Owls can be attracted by setting up owl nest boxes;		
Surface and Groundwater Pollution				
The waste transfer station will result in the addition of new impervious surfaces that will increase the quantity of runoff. Rainfall and wash-down water from roofs, internal roads areas at the transfer station may eventually reach a constructed/natural storm water system. Runoff which has been in contact with waste is considered "leachate". Runoff may also percolate into the ground-water system. Accidental spillages of hydrocarbons and oil leaks may potential impact on the groundwater.	Medium (-)	• All surfaces within the waste transfer facility have been designed to be hard impervious surfaces; • The facility will be designed to have asphalt, concrete slabs and paving. Waste will be stored in bins and will be roofed to prevent rain from entering the bins and coming in contact with waste; • An earth berm /drain will be constructed to divert storm water away from the Transfer Station site; • A grease trap will be situated at the lowest point of the graded site; • All storm water and water from hosing down the tipping floor will flow to the grease trap; • Water from the grease trap would either flow to a septic tank/conveyance container. The septic tank/container will be emptied by the municipal sewage service provider for disposal at the municipal sewage works; • Liquid spills such as oils and hydrocarbons should be cleaned up by absorbent materials rather that hosing them down into drains; (these are not generally accepted at waste transfer stations but can find their way into the system in small quantities); • Waste removal vehicles/ municipal compactor and relief vehicles must be kept in good working order and must be regularly serviced;	Low	Low
Visual Impact				
The proposed waste transfer station locality is within a rural-agricultural area next to an existing cemetery, edible oil factory and over the road from a	Medium (-)	• The waste transfer station will be enclosed with a 2.4 m high boundary wall which will screen the facility and its operations from adjacent and surrounding land uses; • Good housekeeping measures should be implemented including regular cleaning; • Regular cleaning and removal of waste on a daily basis must take place. If there are small quantities-no waste on site risk for wind-blown contamination will be	Low	Medium

guest house and small holdings. The operations of the facility may have a negative visual impact on the surrounding land uses.		less; • Mogale City Local Municipality anticipates removing 90% of incoming waste on a daily basis, only leaving 10% of incoming waste overnight at the waste transfer station; • Waste trucks should not be overfilled and should be adequately covered with tarps/netting to prevent windblown litter impacts; • Nearby access roads and surrounding properties must be patrolled for wind-blown litter and be cleaned on a weekly basis; • Border plants and indigenous trees can be planted along the perimeters of the facility to further screen the facility.		
Air Quality (Odour, dust)				
The prevailing wind direction for the area is a north westerly wind.. Waste, particularly food waste and grass, has a high potential for odour which may cause a nuisance to surrounding land uses. Waste collection vehicles, bin removal vehicles will mostly travel on the R509 Magalies/Koster Road which is surfaced and would gain direct access from the regional road to the a proposed surfaced entrance point into surfaced facility. Air quality impacts due to dust would be very low. Unloading dry dusty waste, exhaust from vehicles and trucks may increase dust levels on site.	Medium (-)	• The public ramp and concrete slabs where waste skips will be stored will be roofed to prevent rainwater from entering skips and to provide shade which will result in less sunlight and water exposure to prevent bad odours; • "First-in, first out" waste handling practises that keep on site only for short periods of time should be implemented; • Remove all / majority of waste from the tipping floor by end of each operating day to that these surfaces can be swept clean and washed down; • "Good housekeeping" measures, including regular cleaning and disinfecting of surfaces and equipment that come into contact with waste must be implemented; • Water misting and / or applying deodorizing systems. • Keep all municipal waste delivery and collection vehicles in good working order and service them regularly;	Low	Medium
Noise Impact:				

Noise will be generated form municipal waste vehicle traffic (2 Ton vehicles) and tipping of skips (loading and offloading). There will be no conveyor/mechanical sorting of waste at the facility. The waste transfer station would be located next to the R509 regional road which is a noise contributor in the area. The increase in noise levels from the facility would be similar to noise levels from the levels from the regional road.	Medium (-)	• The waste transfer station will be enclosed by a 2.4m high brick wall which would serve as a sound barrier for operational activities undertaken within the waste transfer facility; • Operational activities which generate the most noise should be conducted between normal operating houses of 08:00 – 17:00. No waste should be collected and dropped off Sundays or public holidays.	Low	Medium
Traffic Impact and impact on road usage				
Increase in traffic will be experienced in the immediate area of the waste transfer station on the R509 Magalies/Koster road during weekdays. Only 20 vehicles are anticipated to frequent the waste transfer station on a daily basis.	Medium (-)	• The existing entrance will be upgraded to both the cemetery and waste transfer station to allow for unobstructed entry to the facilities; • Additional road signage must be placed along the R509 Magaliesburg/Koster Road to signal the entrance point to the facility and speed limits of 60km/hour within the area would need to be enforced; • Provide adequate space within the facility so that customers and waste collection vehicles waiting to use the transfer station do not interrupt traffic on the regional road or impact on nearby residences or business.	Low	Low
Litter / Waste				
Litter from open waste skips could occur under windy conditions. Tipping of waste onto a floor could also spread to adjacent areas under windy conditions. Waste collection vehicles,	Medium (-)	• Orientation of the waste transfer facility must be with respect to the predominant wind direction so it is less likely to carry litter out through open gates, or buildings. • All vehicles transporting waste should not be overfilled and should be adequately covered with traps to prevent windblown litter impacts; • Patrol access routes and adjacent areas to control litter from collection vehicles and or private pick-up vehicles;	Low	Medium

private pick-up vehicles travelling to and from facility could result in wind-blown litter.				
Socio-economic impact				
Employment creation could improve few household incomes in the long term	Positive impact (+)	None required	Not applicable	Not applicable
The development of the waste transfer station may potentially impact on neighbouring/surrounding property value. It may potentially increase or decrease the property values. The location of the waste transfer station in an area characterized as rural-agriculture and tourism may impact on tourism related facilities if not properly managed.	Medium (-)	All management measures prescribed for visual impact, noise, air quality and litter must be strictly implemented. Nuisance impacts related to the waste transfer station can be mitigated and controlled. Proper design choices and well-managed operations can and do address potential negative impacts.	Low	Medium
Safety and Security				
The proposed operation of the waste transfer station may attract vagrants, waste pickers, private recyclers which may negatively impact on the safety and security of the area. Poor security control measures could lead to: • Dumping of wastes not permitted at the stie; • Illegal collection of recyclable waste; • Site becoming	Medium (-)	The security wall and controlled access gate will prohibit unauthorised entry. Waste Pickers and/or private recyclers will not be allowed to collect any wastes from this facility. • The facility should not operate on Sundays or public holidays. The facility will only operate from 08h00 – 17h00 and must be locked thereafter. • The security gate should be manned at all times during operation hours; • Ensure the vehicles entering the facility drop off the correct waste types; • Record / take down registration numbers of vehicles entering the facility;	Low	Medium

<table>
<tr><td>overfilled;
• Littering on site and off site</td><td></td><td></td><td></td><td></td></tr>
<tr><td>Health Impact</td><td></td><td></td><td></td><td></td></tr>
<tr><td>Rodents, flies can become a nuisance and potential health concern at the waste transfer station and a nuisance to adjacent properties.</td><td>Medium (-)</td><td>• The majority to all incoming waste should be removed from the facility by the end of each day.
• “First in, first out” waste handling practices that keep waste on site only for short periods of time;
• The Site Manager must implement a pest and rodent management control plan at least every quarterly. Good housekeeping and daily removal of waste and disinfecting surfaces would be the most effective means of minimizing the presence of pests;
• The Mogale City Local Municipality should agree with Amanah Oil CC to pay “neighbours extermination Pest control costs” if it can be proven that the waste transfer facility is the source of the problem for rodents;
• Biological Pest Control Programmes can be implemented by either using Rat Zappers as a mechanical control measure (rodents are enticed into a trap in which they are killed by a quick powerful electric shock) or the use of Barn Owls as a Biological control measures. These owls can contribute significantly to the control of rats and mice. Barn Owls can be attracted by setting up owl nest boxes.</td><td>Low</td><td>Medium</td></tr>
<tr><td>The presence of vectors / rodents on the waste transfer station premises may pose a health risk to employees.

Employees are also at risk of contracting diseases when handling green wastes and other general wastes at the waste transfer facility</td><td>High (-)</td><td>
<table>
<tr><th>Problem</th><th>Cause</th><th>Route into the body</th></tr>
<tr><td>Infections</td><td></td><td></td></tr>
<tr><td>Rat fever (leptospirosis)</td><td>Rat urine</td><td>Cuts and grazes</td></tr>
<tr><td>Tetanus (lockjaw)</td><td>Soils and organic material</td><td>Deeper cuts and wound</td></tr>
<tr><td>Botulism</td><td>Soils</td><td>Ingestion: hand to mouth contact</td></tr>
<tr><td>Pasteurella multocida</td><td>Dog bites</td><td>Skin pierced by bite</td></tr>
<tr><td>Chemicals</td><td></td><td></td></tr>
<tr><td>Pesticide and insecticide residues</td><td>Garden sprays, Slug Killers etc</td><td>Cuts, grazes, hand to mouth contact</td></tr>
<tr><td>Skin problems</td><td></td><td></td></tr>
<tr><td>Premature skin ageing</td><td>Excessive exposure to sunlight</td><td>Through unprotected skin</td></tr>
<tr><td>Skin cancer</td><td></td><td></td></tr>
</table>
Preventatives measures that should be implemented to address potential health hazards include:
<table>
<tr><th>Problem</th><th>Preventative measures</th></tr>
<tr><td>Infections</td><td></td></tr>
<tr><td>Rat fever (leptospirosis)</td><td>Good hygiene</td></tr>
<tr><td>Tetanus (lockjaw)</td><td>Wear protective clothing</td></tr>
<tr><td>Botulism</td><td>Cover cuts and grazes</td></tr>
<tr><td>Pasteurella multocida</td><td>Clean up any wounds quickly and apply antiseptic</td></tr>
<tr><td>Chemicals</td><td></td></tr>
</table>
</td><td>Low</td><td>Medium</td></tr>
</table>

		<table><tr><td>Pesticide and insecticide residues</td><td>Cover up Wear protective clothing Good hygiene</td></tr><tr><td>Skin problems</td><td></td></tr><tr><td>Premature skin ageing</td><td>Cover up</td></tr><tr><td>Skin cancer</td><td>Wear hats and long sleeved shirts Use sunscreen</td></tr></table> Employees at the waste transfer station should wear appropriate personal protective equipment. Common pieces of protective gear include: • Hard hats; • Protective eye goggles • Dust masks • Steel tipped boots • Protective gloves • Hearing protection		

NO GO OPTION- WASTE TRANSFER STATION OPERATION

Potential impacts:	**Significance rating of impacts (positive or negative):**	**Proposed mitigation:**	**Significance rating of impacts after mitigation:**	**Risk of the impact** and **mitigation not being implemented**
No potential visual impacts are anticipated to/on surrounding properties	Medium-Low (+)	None required	Insignificant	Not applicable
Potential for windblown contamination from private waste dump sites created on each property (creation of individual/domestic dump sites due to lack of service in area)	High (-)	• Creation of a waste transfer station would establish a “convenience centre” for the community to dispose of their wastes; • Collection of waste in the local area by municipal waste collection vehciles and shipment to the regional landfill site will eliminate illegal dumping of wastes along regional roads, gravel roads on fallow land.	Medium (-)	Medium
Waste discard along access roads (R509 and other gravel	High (-)		Low	High

roads); Creation of several illegal dump sites on fallow land				

If the development does not go ahead, it is likely that the site will remain as is in the short – medium term. The Automotive workshop lease agreement with Mogale City Local Municipality would continue and the use of the majority of the property as grazing for cattle would continue. This is however of little economic use to the municipality considering the service requirements in the local area and need for land to establish such.

In the short term the no-go option would not negatively affect the local community. Yet upon closure of the Ga-Mohale Landfill site the effect of no local waste facility would affect the local community. The benefit of a waste transfer facility would then be realized. The no go option would hold disadvantages to the local area:

- Increased cost of solid waste management services; (it was available through the Ga-Mohale landfill site which will be closed off)
- It will further increase overall transportation costs of waste from collection points to the regional landfill site for the municipality and in turn increase waste disposal costs for the local community;
- The convenience of the current location would be replaced with a distant drop-off area which would be time consuming for the local community traveling to and from the facility and ultimately lead to inconvenient disposal methods

Moreover some residents may feel reluctant to travel the odd 40km to the Regional Landfill site to dispose of their domestic waste and create illegal dumping sites in turn generating waste/littering in the local area.

List any specialist reports that were used to fill in the above tables. Such reports are to be attached in the appropriate Appendix.

- Geotechnical Investigation by WSM Leshika – Appendix G1
- Ecological Impact Assessment Report, Dimela Eco Consulting – Appendix G2
- Wetland Delineation & Functional Assessment, Limosella Consulting – Appendix G3
- Heritage Impact Assessment Report, Naledzi Environmental Consultants – Appendix G4
- GeoHydrological Investigation Report, Naledzi Waterworks – Appendix G5

Describe any gaps in knowledge or assumptions made in the assessment of the environment and the impacts associated with the proposed development.

There are no gaps in knowledge. The specialist investigations were conducted to advise on potential impacts that may be associated with the proposed project considering the biophysical conditions on site which included:

- geotechnical conditions on site;
- the ecology on site;
- Delineation of wetland and also assessment of the function of the wetland;
- Identify any Cultural or Heritage Resources;
- Investigate the geohydrological conditions on the study site.

The most prominent concern which was raised by I&APs with regards to the development of the proposed Magalies Cemetery was the potential for groundwater pollution and the effect on other domestic water abstraction points in the local area. This was determined by the geohydrological investigation supplemented by the geotechnical investigation. There are 3 factors which determine the risk of potential groundwater pollution from cemeteries:

- Permeability of soils and groundwater seepage;
- Depth of water table;
- Distance to domestic water abstraction points

The development site soils have been found to be only slightly permeable. The risk for pollution is therefore low to negligible. The depth of the water table is stated to be approx. 28m, yet in some areas towards the wetland groundwater creates perched conditions / seepage areas. Areas susceptible to seepage have been delineated and are excluded from the cemetery development footprint. The southern section of the site is suitable for development of the cemetery which would allow 2.5m below the bottom of a grave above the groundwater level. Monitoring boreholes are proposed upstream and downstream of the facility to monitor the quality of groundwater. The nearest borehole is onsite and 100m west of the site at Amanah Oil CC. No burials will take place within 75m of any borehole.

The most prominent concern raised with regards to the development of the Waste Transfer Station was related to nuisance impacts (visual impact, noise, odour, wind-blown contamination, pollution potential and health hazards). These nuisance impacts and their sources were studied and it was found that it can be well managed by implementing “Good housekeeping management practices and removing the majority of incoming waste to the regional landfill site on a daily basis. Nuisance impacts can be managed to low to insignificant levels.

3. IMPACTS THAT MAY RESULT FROM THE DECOMISSIONING AND CLOSURE PHASE

Briefly describe and compare the potential impacts (as appropriate), significance rating of impacts, proposed mitigation and significance rating of impacts after mitigation that are likely to occur as a result of the decommissioning and closure phase for the various alternatives of the proposed development. This must include an assessment of the significance of all impacts.

Magalies Cemetery

The cemetery is a set at its location. Once a cemetery is established, it is only in exceptional cases that the cemetery is moved elsewhere/decommissioned. The land is set aside for use as a cemetery in perpetuity.

Magalies Waste Transfer Station

It is not anticipated that the transfer station site will be decommissioned as this facility is required in the area as a long term solid waste management facility. Should the site ever be decommissioned and closed, a Closure Plan needs to be compiled by a suitably qualified Environmental Assessment Practitioner and should be submitted to GDARD for review and approval.

Proposal

Potential impacts:	**Significance rating of impacts(positive or negative):**	**Proposed mitigation:**	**Significance rating of impacts after mitigation:**	**Risk of the impact** and **mitigation not being implemented**

List any specialist reports that were used to fill in the above tables. Such reports are to be attached in the appropriate Appendix.

Not applicable

Where applicable indicate the detailed financial provisions for rehabilitation, closure and ongoing post decommissioning management for the negative environmental impacts.

Not applicable

4. CUMULATIVE IMPACTS

Describe potential impacts that, on their own may not be significant, but is significant when added to the impact of other activities or existing impacts in the environment. Substantiate response:

CUMULTATIVE IMPACTS FROM THE FACILITIES

Groundwater pollution:

Potential groundwater pollution from the various sources (existing cemetery) proposed cemetery and potential impacts from the waste transfer station may have a cumulative impact on the ground water quality of the area if not managed.

The Geohydrological Investigation has however determined that risks from the proposed cemetery would be low to negligible due to the slightly permeability of soils. Two monitoring boreholes will be drilled upstream and downs stream of the cemetery and waste transfer station. These measurements would monitor (inevitably) both the existing and proposed cemetery and waste transfer station's effect on groundwater quality. This will be recommended with the EMPr as well.

Increase in traffic in the local area (site access point)

The R509 Magalies/Koster Road experiences moderate traffic volumes. Traffic from the

cemetery would predominantly increase during weekends. Traffic increase due to the WTS would predominantly increase during the week. The cumulative impact from both facilities would be moderate.

The creation of the WTS would on a regional scale reduce traffic at the disposal facility. The fact that fewer vehicles go to the landfill reduces congestion and operating costs and increases safety. It also reduces the overall community traffic by consolidating smaller loads into larger vehicles. MCLM has indicated that adequate parking space is available in front of the old/existing cemetery . Adequate space at the WTS must be provided so that customers and waste collection vehicles waiting to use the WTS do not interrupt traffic on the regional road.

5. ENVIRONMENTAL IMPACT STATEMENT

Taking the assessment of potential impacts into account, please provide an environmental impact statement that sums up the impact that the proposal and its alternatives may have on the environment after the management and mitigation of impacts have been taken into account with specific reference to types of impact, duration of impacts, likelihood of potential impacts actually occurring and the significance of impacts.

Proposal

Although negative environmental impacts are generally anticipated for the cemetery and waste transfer station there impacts are largely alleviated by migratory measures and facility design considerations. Naledzi Environmental Consultant CC is of the opinion that the proposed facilities should be approved based on specialist findings and strict implementation of management measures.

The findings are based on the following:

Land Capability

The site is considered of high agricultural potential in terms of the Gauteng Agricultural Potential Atlas. There are signs of historic cultivation, but it has not been cultivated for the past 11 years. Currently the land parcel lies fallow and is being used as cattle grazing by surrounding land owners. The site consists mostly of pioneer grasses with low nutritional value. The impact would therefore be low.

Ecology: (Both cemetery and waste transfer station)

The site is not situated in areas of conservation concern as per the Gauteng Conservation Plan (Version 3.3) or within a listed ecosystem. Although the site is situated in the savannah biome, the assessment found that the site comprised of grassland vegetation, with some woody elements in the rocky grassland.

The main aspects from the cemetery and waste transfer station are removal of vegetation and the destruction of plants that are of conservation concern. The envisaged impacts on sensitive vegetation groups as well as protected plant species can be mitigated by avoidance and by limiting the impact. Protected plant species can be relocated to the remaining land of Portion 22 which is being excluded from the development layout nl. Good state rocky grassland and moist grassland.

As per the site layout, the moist grassland and adjacent rocky grassland will not be developed. The impacts will be concentrated on the mowed grassland on the southern portion of the site, transformed areas and secondary grasslands, as well as the rocky grassland that was degrading due to invasion by alien invasive plant species. The development footprint will not impact on areas of medium-high sensitivity and provided that mitigation measures as set out in this report are implemented, will have a negligible impact on grasslands of conservation value.

Impact on Wetland/ Aquatic Ecosystem (both facilities)

The unchannelled valley bottom wetland was identified on site. The present ecological status is D which is largely modified and its ecological importance and sensitivity is moderate. It is not sensitive to flow and habitat modification.

Groundwater contamination is a potential impact of the operational phase of the proposed Cemetery that should be addressed at the design phase of the development. Mitigation measures relevant to the construction phase of the Cemetary Phases A and B as well as the Waste Transfer Site include:

- Changing the quantity and fluctuation properties of the watercourse by changing runoff characteristics of the area surrounding the wetland (by for example compacting soils)
- Changing the amount of sediment entering water resource and associated change in turbidity (increasing or decreasing the amount)
- Alteration of water quality – increasing the amounts of nutrients (phosphate, nitrite, nitrate)
- Alteration of water quality – toxic contaminants (including toxic metal ions (e.g. copper, lead, zinc) and hydrocarbons

In order to limit the impact on the hydrology of the area, a 100m buffer zone has been recognised from the edge of the wetland. The buffer area should be clearly marked during construction and workers must be informed that activities and traffic beyond the buffer zone must be limited to only that which is

necessary.

Groundwater / GeoHydrology (mostly pertains to the cemetery)
As the soils on site were found to be only slightly permeable the risk of pollution from the cemetery is thought to be low.

It is strongly advised that a proper management and monitoring programme be implemented to ensure that the groundwater resources are not impacted. This should include:

- drilling of a monitor borehole upstream and downstream of the proposed cemetery
- measure the water level in this monitor borehole
- Water sampling and analysis for bacterial indicators is recommended on a quarterly basis.

If monitoring demonstrates that groundwater contamination is taking place, burials at the site should be halted while further investigations are undertaken to determine the reason for deterioration.

Nuisance impacts from the Waste Transfer Station during Operation
The waste transfer station may pose undesirable impacts which pertain to visual impact, odour, noise, traffic, rodents & birds and potential waste/littering on site and surrounding areas. All these impacts can be managed through good facility design and implementation of "Good Housekeeping" measures.

Impact on socio-economic activities/ surrounding land uses
The study area is characterized by agricultural activities, interspersed by tourist accommodation facilities / conference facilities. An edible oil factory is located east adjacent to the site and an existing cemetery is west adjacent to the site.

The impacts that may become a undesirable to surrounding land uses pertain to visual, odour, noise, traffic and health as well as littering. As per above these impacts can be adequately managed. This would lower the impact on surrounding land uses and curb the possible impact on surrounding socio-economic activities.

The benefits of both the facilities would benefit the local community.

- The cemetery would augment the existing Magalies Cemetery and provide additional burial space in the area;
- Additional burial space will reduce illegal burial grounds that exist in the area;
- Both the developments will result in capital investment in the area;

It is believed that the waste transfer station will benefit the local community. It would serve as a convenience centre at which the public can drop-off their wastes in containers which are removed by municipal waste removal vehicles to the regional landfill site. It will make solid waste collection more efficient and lower costs of solid waste management services. It will further reduce traffic at the regional landfill site.

This waste transfer station in particular is required to move the local areas waste efficiently from the point of collection to the distant, regional landfill site. By consolidating the waste collection and disposal points.

The impact from the development and operation of the proposed facilities is considered to be Medium-Low after consideration of potential negative impacts and prescribing mitigation measures to manage them and weighing the benefits of such facilities to the local community.

Alternative 1

No alternative was considered in this proposal

Alternative 2

No alternative was considered in this proposal

No-go (compulsory)

This will involve the status quo of the study site to continue. This involves no development of any infrastructure and will present both direct and indirect negative environmental impacts:

- No employment opportunities will be created
- Shortage of burial space;
- Illegal burial grounds will be created;
- Waste cannot be collected on a daily basis from the local community and transported to the Luiperdsvlei Landfill Site.
- Increased cost of solid waste management services;
- Increase in overall transportation costs of waste from collection points to the regional landfill site for the municipality and in turn increase waste disposal costs for the local community;
- Induce illegal dumping sites, disposal of waste along access roads and in the veld.

Therefore a cemetery and waste transfer station is required in the local area to augment and provide public amenity.

6. IMPACT SUMMARY OF THE PROPOSAL OR PREFERRED ALTERNATIVE

For proposal:

The proposals will be developed on Portion 22 of the farm Rietpoort 395JQ.

The cemetery requires the following attributes:

- Impervious soils to lower the risk for groundwater contamination (type of soil, permeability);
- The soils are soft enough to dig/excavate for graves;
- Is accessible from the R509 Magalies/Koster Road;
- Is in proximity to the Magalies area (town, rural areas)

The site soils are slightly impermeable and thus have a low risk for groundwater contamination as stated in the Geohyrdological Investigation. This will however need to be monitored. The cemetery is anticipated to have a low environmental impact with implementation of mitigation measures.

The preferred proposal will also:

- Provide job opportunities;
- Will provide burial ground for local communities
- Augment the existing cemetery;

The proposed waste transfer station is moreover considered to be a “convenience centre” at which public can drop-off waste into bins, the municipal waste removal vehicles then empty the bins and remove it to the regional landfill site. Waste transfer stations will requires the following attributes:

- Direct access to transport routes (such as the R509 regional road)
- In proximity of the collection points

The proposed and preferred site selected for the transfer station is transformed, already consists of a workshop/shed that can be converted for infrastructure of the facility. It is located next to the R509 regional road and within the area to be serviced. The Ga-Mohale Landfill site is set for closure. There are no other waste disposal facilities in the local area to which the community can take their waste for disposal other than the regional landfill site. Thus the facility would be in proximity of its collection points.

The waste transfer station will also:

- Be conveniently located for the local community to drop off waste;
- Lower costs for solid waste management services;
- Lower potential for illegal dumping along access roads or in the local area;

The operation of the waste transfer station may potential pose negative nuisance impacts. This can be addressed and mitigated to low levels.

For alternative:

No alternatives were considered for the proposed activities

Having assessed the significance of impacts of the proposal and alternative(s), please provide an overall summary and reasons for selecting the proposal or preferred alternative.

The need for the cemetery is prompted by illegal burial grounds which exist in the area. There currently is a cemetery in Rietpoort, but it will reach full capacity. A new cemetery is proposed to address the need for further committal grounds in the area next to the existing Magalies. Therefore the preferred locality of the cemetery at Portion 22, Rietpoort 395JQ next to the existing cemetery.

A waste transfer station was selected to serve as a convenience center at which the public of the local area can drop-off their waste for later shipment to the regional landfill site by the local municipality. Furthermore for the local municipality as a temporary waste storage site whilst collecting waste in the local area before consolidating it into a larger vehicles and removing it to final disposal site. The closure of the nearby Ga-Mohale landfill site will result in increased haulage costs of waste by the public to the regional landfill site some 40km away. There is therefore a need for such as facility in the local area with the anticipated closure of Ga-Mohale.

NEC believes that all environmental sensitive areas have been identified, delineated through specialist inputs and excluded from the development footprint. The site plan set out on the project site is considered environmentally feasible.

7. SPATIAL DEVELOPMENT TOOLS

Indicate the application of any spatial development tool protocols on the proposed development and the outcome thereof.

In terms of the Mogale City Local Municipality Spatial Development Framework 2011 GDARD has set out a number of agricultural hubs in the province. The south-western part of Mogale City, roughly to the south and west of the R24 Rustenburg road forms part of one such hub. The site roughly falls within this area. The SDF earmarks the area as “focused agricultural development”.

The Magaliesburg Precinct Plan earmarks areas west of Magaliesburg as an “extensive agricultural and tourism zone” and the areas east of Magaliesburg is earmarked for “intensive agriculture and conservation zone”. The study site, falls within an area of extensive agriculture and tourism zone.

The cemetery and waste transfer station is considered services infrastructure as supporting land uses for the rural area not aimed at influencing the agricultural potential for the area.

According to the SDF 2011 (Map 17: Land use suitability preferences) the site falls within an area of no dominant potential.

8. RECOMMENDATION OF THE PRACTITIONER

Is the information contained in this report and the documentation attached hereto sufficient to make a decision in respect of the activity applied for (in the view of the Environmental Assessment Practitioner as bound by professional ethical standards and the code of conduct of EAPASA).	**YES**	NO

~~If "NO", indicate the aspects that require further assessment before a decision can be made (list the aspects that require further assessment):~~

If "YES", please list any recommended conditions, including mitigation measures that should be considered for inclusion in any authorisation that may be granted by the competent authority in respect of the application:

All the mitigation measures proposed in the Basic Assessment Report as well as monitoring and mitigation measures proposed in the EMPr must be adhered to.

NEC believes that the EIA process for the proposed facilities fulfills the process requirements of the current EIA Regulations of 2014. Issues and associated impacts pertaining to the facilities have been investigated by the EAP and where specialist inputs were required such were obtained and impacts investigated further through a Geotechnical Investigation, Wetland Delineation, Ecological Assessment, Geohydrological Investigation and a Heritage Impact Assessment. Extensive efforts were made to identify and involve potential affected parties during the public participation process. The public has been afforded opportunities to participate in the BA process. Comments solicited during this process have been recorded and considered.

NEC believes that all environmental sensitive areas have been identified, delineated through specialist inputs and excluded from the development footprint. The site plan set out on the project site is considered environmentally feasible. The impacts associated with the facilities have been scoped and assessed. The cemetery is not considered of major concern and has few issues and management measures which need to be implemented. These are prescribed in the EMPr.

The waste transfer station would be located in a rural landscape scattered with tourism facilities. NEC believes that the facility type, being a waste transfer station, not a landfill site, would be in line with the surrounding land uses ***if operated and managed according to best practice*** and if ***strict Good House Keeping rules are implemented***. The main objective is to remove daily waste intake to the Luiperdsvlei Regional Landfill Site at the end of each business day. MCLM has undertaken to implement such. Operation of the transfer station should be limited from Monday-Fridays 08:00 to 17:00. The facility can be open to the public on Saturdays to solely receive drop-offs not compact and remove waste due to anticipated noise. Saturday operation would limit illegal dumping in front of the facility during weekends.

The site locality is considered feasible albeit; if the facility is not operated, managed according to the EMPr and MCLM's is not acting according to its undertaking then the waste facility is not considered feasible within this rural-agricultural-tourism landscape. Thus onus is on the applicant to comply with all its legal obligations in terms hereof and to ensure that the facility is managed according best practice.

In the long term MCLM is to identify and establish a new local landfill site for the area to prohibit overfill at the waste transfer station as a result of increased settlement development activities and waste contributors. This was also the sentiment of the public at the public meeting for the project which served to facilitate comments on the BAR.

It is recommended that the proposed Magalies Cemetery and Waste Transfer Station is authorised subject to the following conditions:

1. The EMPr is to include controls to restrict construction activities to working hours (08h00 to 17h00);
2. EMPr is to include controls to ensure construction machinery and workers do not make excessive noise.
3. The EMPr is to include conditions to control dust during the construction phase;
4. A proper management and monitoring programme must be implemented to ensure that groundwater resources are not impacted. This should include drilling of a monitoring borehole upstream and downstream of the proper cemetery to measure the water level in the borehole and conduct water sampling and analysis for bacterial indicators on a quarterly basis;
5. If monitoring demonstrates that groundwater contamination is taking place, burials at the site should be halted while further investigations are undertaken to determine the reasons for deterioration;
6. A 32m buffer zone must be recognized from the edge of wetland.
7. The seepage area and wetland buffer areas should be clearly marked during construction and workers must be informed that activities and traffic beyond the buffer zone must be limited to which only is necessary;
8. A Water Use License must be obtained from the Department of Water & Sanitation for any Section 21 Water Uses that may take place as a result of the activity. Such water uses may not take place until the license/permits are obtained;
9. The seepage areas identified as in the Geotechnical Investigation by WSM Leshika must be excluded from the development footprint of the cemetery;
10. No grave may be created and may be excavated within 75m of any borehole. It is recommended that borehole locations of neighbouring properties are established and perimeters established;
11. Phase B of the proposed Magalies Cemetery is to restrict any graves within 75m from the existing operational borehole on the development property as identified in the GeoHyrdological Investigation conducted by Naledzi Waterworks;
12. Trenches should not be opened too far in advance as the possibility for sidewall collapse and trench flooding is a high probability (especially during and after rains);
13. Do not allow trenches to stand open for longer than 2 days. Excavations should preferably be opened and closed at the same time;
14. No trenching through wetlands/drainage line may take place. Such areas must be excluded from the development area;
15. Only remove vegetation where absolutely necessary for graves.
16. A Plant Rescue and Rehabilitation Plan should be implemented. Plants of con
17. Plants of conservation concern that are deemed to be in the way of graves, should be removed by a suitably qualified specialist and replanted in a pre-determined suitable habitat.
18. Rehabilitation of disturbed areas must be undertaken as soon as possible to avoid soil erosion;

19. Planting of trees and border plants are encouraged around the cemetery to help decrease the movement off-site of bacteria and viruses in seepage water and rain water.
20. Stormwater management system should be designed by a suitably qualified engineer and implemented to manage stormwater runoff during construction phase and operational phases of both the cemetery and waste transfer station.
21. Operation of the waste transfer station should be restricted to Monday – Friday during business hours 08h00 – 17h00. Public drop-off is allowed at the facility on Saturdays from 08h00 – 12h00. The facility may not operate on Sundays or during public holidays.
22. Waste bins in the waste transfer station are to placed under roof to protect wastes from exposure to heat, sunlight and rainwater from entering skips;
23. The waste transfer station must be designed to have impervious surfaces;
24. An earth berm/drain must be constructed to divert storm water away from the waste transfer station;
25. A grease trap must be constructed for the facility at the lowest point of the site. All stormwater and water from hosing down of the waste transfer station tipping floor must flo to the grease trap;
26. "First in, First Out" waste handling practices must be implemented at the Waste Transfer Station;
27. "Good Housekeeping" measures, including regular cleaning and disinfecting of surfaces and equipment (if any) that come into contact with waste must be implemented;
28. The waste transfer station must be an enclosed (walled off) facility;
29. The Site Manager at the Waste Transfer Station must implemented a pest and rodent management control plan at least every quarterly;
30. Waste vehicles should not be overfilled and must be adequately covered with a tarp/netting to prevent windblown contamination;
31. Nearby access roads should be patrolled to control litter from waste removal vehicle traffic;
32. An independent Environmental Control Officer must be appointed to monitor implementation of the EMPR on a monthly basis during the construction phase. Monthly audit report must be submitted to GDARD;

The EMPr should be available on site at all times during the construction and rehabilitation phases and should be strictly adhered to.

9. THE NEEDS AND DESIREBILITY OF THE PROPOSED DEVELOPMENT (as per notice 792 of 2012, or the updated version of this guideline)

Waste Transfer Station: The existing GA-Mohale Landfill site is located close to Magaliesburg, some 8km east of the study site. This landfill site is set for closure as a local college has been developed too close to this landfill site, causing some health and environmental concerns. GDARD has called upon MCLM to promptly close the landfill site and establish alternative measures for waste management in the local area. The site can only be closed if an alternative means of waste removal is in place for the area.

MCLM thus proposes to create a waste transfer station to create a link between the existing distant Luiperdvlei Regional landfill site and the local communities which would enable the

closure of the existing landfill site at Ga-Mohale.

The waste transfer station would be located in a rural-agricultural-tourism area. The waste transfer station is considered a light industrial type land use within a rural area. The facility is desired at the location in terms of the service it would provide to the local community and benefit. It will be located next to an existing edible oil factory and existing cemetery. It would further be located alongside a regional road. It is desired by Mogale City Local Municipality that the facility is development within the locality to service a particular area in term of solid waste management.

It was indicated at the project public meeting is that the community feels that the waste transfer station should be considered a short term solution for waste management for the area once GA-Mohale Landfill site is closed. It is considered an ancillary use to a newly required landfill site for the area. It should trigger / mobilise the planning for a new landfill site.

Cemetery: The upgrading of cemeteries around Mogale City are prompted by illegal burial grounds which exist in the area. The existing Magalies cemetery at Rietpoort, is to reach its full capacity. A new cemetery is proposed to address the need for further committal grounds in the area and to augment existing public amenity.

The new cemetery is being proposed next to the existing Magalies Cemetery which is considered a natural flow area (locality) for a new cemetery. The locality is desirable.

10. THE PERIOD FOR WHICH THE ENVIRONMENTAL AUTHORISATION IS REQUIRED
(CONSIDER WHEN THE ACITIVTY IS EXPECTED TO BE CONCLUDED)

10 years

The cemetery will be developed in phases. Phase A will be constructed along with the waste transfer station from onset. Phase B of the cemetery will only be commissioned in the next 10 years of operation of Phase A of the cemetery.

Regulations specify that commencement must occur within 10 years and no extension of this period is possible without following prescribed amendment processes.

11. ENVIRONMENTAL MANAGEMENT PROGRAMME (EMPr) (must include post construction monitoring requirements and when these will be concluded.)

If the EAP answers "Yes" to Point 7 above then an EMP is to be attached to this report as an Appendix

EMPr attached	YES

SECTION F: APPENDIXES

The following appendixes must be attached as appropriate (this list is inclusive, but not exhaustive):

It is required that if more than one item is enclosed that a table of contents is included in the appendix

Appendix A: Site plan(s) – *(must include a scaled layout plan of the proposed activities overlain on the site sensitivities indicating areas to be avoided including buffers)* **(included)**

Appendix B: Photographs (included)

Appendix C: Facility illustration(s) (included)

Appendix D: Route position information (not applicable)

Appendix E: Public participation information (included)
Appendix E1: Proof of site notices
Appendix E2: Written notices as required into regulations (BID)
Appendix E3: Proof of Newspaper Advertisement (Announcement of EIA, BAR availability)
Appendix E4: Communications to & from I&Aps
Appendix E5: Minutes of public meetings of 12 September 2015
Appendix E6: Issues and Response Report Version 2
Appendix E7: Comments from I&Aps on the BAR
Appendix E8: Comments from I&Aps on Amended BAR (not included-no amended versions)
Appendix E9: Interested and Affected Party Database

Appendix F: WULA Submission is pending,
Proof of submission of BAR & BID to SAHRA, **(included)**

Appendix G: Specialist reports (included)
Appendix G1: Geotechnical Investigation, WSM Leshika Consulting, October 2014
Appendix G2: Ecological Impact Assessment Report, Dimela Eco Consulting, March 2015
Appendix G3: Wetland Delineation & Functional Assessment, Limosella Consulting, March 2015
Appendix G4: Heritage Impact Assessment Report, Naledzi Environmental Consultants,March 2015
Appendix G5: GeoHyrdological Investigation Report, Naledzi Waterworks, March 2015

Appendix H: EMPr (included)

Appendix I: Other information (included)
Curriculum Vitae of Desmond Musetsho and Declaration of Independence
Curriculum Vitae of Marissa Botha

CHECKLIST

To ensure that all information that the Department needs to be able to process this application, please check that:

- Where requested, supporting documentation has been attached;
- All relevant sections of the form have been completed.

APPENDIX A – SITE PLANS

APPENDIX B – PHOTOGRAPHS

APPENDIX C – FACILITY ILLUSTRATION

APPENDIX D – ROUTE DETERMINATION

(NOT APPLICABLE TO THIS APPLICATION)

APPENDIX E – PUBLIC PARTICIPATION PROCESS

APPENDIX E1 – PROOF OF SITE NOTICES

APPENDIX E2 – BACKGROUND INFORMATION DOCUMENT

AFRIKAANS AND ENGLISH VERSIONS

APPENDIX E3 – PRESS ADVERTISEMENTS

(PROJECT ANNOUNCEMENT & BAR AVAILABLITY FOR PUBLIC REVIEW)

APPENDIX E4– COMMUNICATIONS TO AND FROM I&APS

APPENDIX E5 – MINUTES OF THE PUBLIC MEETING

APPENDIX E6 – ISSUES AND RESPONSE REPORT VERSION 2

APPENDIX E7 – COMMENTS FROM I&APS ON DRAFT BAR

APPENDIX E9 – COPY OF I&AP DATABASE

APPENDIX F –

WULA SUBMISSION PROOF, SAHRA NOTIFICATION PROOF

The Background Information Document and BAR was uploaded onto the SAHRIS online system of SAHRA.

The WULA submission is pending. Department of Water Affairs have submitted their comments on the Draft BAR stipulating the recommendations for the WULA. The WULA will be prepared accordingly.

APPENDIX G – SPECIALIST STUDIES

APPENDIX G1 – GEOTECHNICAL INVESTIGATION

APPENDIX G2 – ECOLOGICAL IMPACT ASSESSMENT

APPENDIX G3 –

WETLAND DELINEATION & FUNCTIONAL ASSESSMENT

APPENDIX G4 – HERITAGE IMPACT ASSESSMENT

APPENDIX G5 – GEOHYDROLOGICAL INVESTIGATION

APPENDIX H – EMPR

APPENDIX I – OTHER INFORMATION

CV OF EAP

Declaration of Independence – Desmond Musetsho